MDV-1402-1V1310

Dealer information

DC Inverter VRF Series 50Hz (V4 Plus S/ V4 Plus W/ V4 Plus R)

COMMERCIAL AIR CONDITIONERS

DC Inverter VRF Series 50Hz

V4 Plus S/ V4 Plus W/ V4 Plus R

GD Midea Heating & Ventilating Equipment Co., Ltd.
Is certified under the ISO 14001 International standard for environmental management.
Certificate No.15912E10020R0L

GD Midea Heating & Ventilating Equipment Co., Ltd.
Is certified under the ISO 9001 International standard for quality assurance.
NO.01 100 019209

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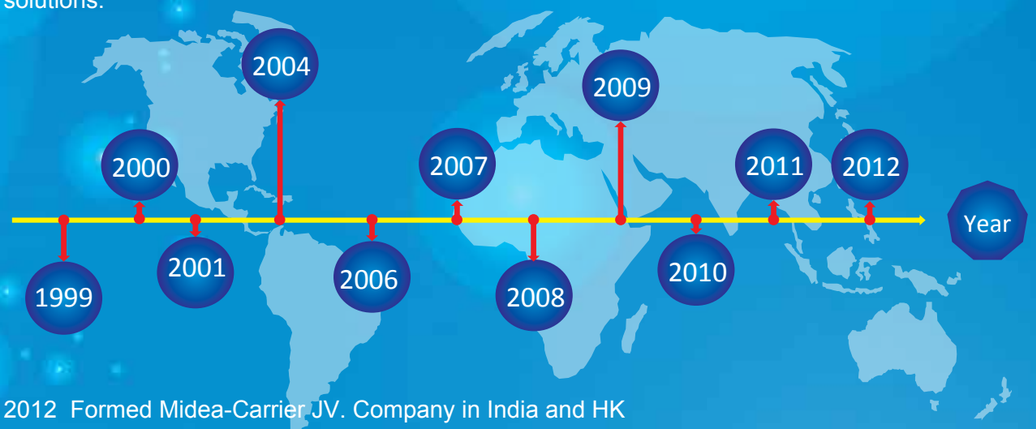
MDV

Operating under the corporate umbrella of Midea Group, MDV is a professional climate control brand that produces different types and classes of air-conditioning systems for application in a wide range of scenarios.

Founded in 1999, MDV emerged from Midea's CAC (Commercial Air-Conditioning) division as a professional indoor climate solution provider and distributor to specialist companies across the globe. Initially, the MDV product portfolio comprised high-tech systems and components for commercial and industry application; for example, VRF (variable refrigerant flow) systems, chillers and fan-coils, compressor condensing units, light commercial air-conditioners.

MDV then expanded into ODM manufacturing, and currently only outputs own-brand products. MDV has successfully deployed its solutions in numerous countries worldwide including Russia, Spain, Brazil, Australia, Israel, Bulgaria, Poland, Turkey, and Saudi Arabia.

MDV has sought to establish a unique strategy and market position based on a philosophy of differentiation that implements standardized marketing, packaging, logo use, and visual branding concepts and designs. MDV has also expanded its global footprint, seeking wider international cooperation to strengthen its global brand equity as a leading provider indoor climate control solutions.



2012 Formed Midea-Carrier JV. Company in India and HK
2011 Formed Midea-Carrier JV. Company in Brazil
2010 Built the 3rd manufacturing base in Hefei
2009 Launched the DC inverter V4 system globally
2008 JV with Toshiba Carrier for the DC inverter technology
2007 Won the first Midea centrifugal chiller project oversea
2006 Launched the first VSD centrifugal chiller
2004 Acquired MGRE entered the chiller industry
2001 Partnered with Copeland to develop the digital scroll VRF system
2000 Developed the first inverter VRF With Toshiba
1999 Entered the CAC field

Products Lineup

V4 Plus S series

Capacity Range	HP	8	10	12	14	16	18
	kW	25.2	28.0	33.5	40.0	45.0	50.0
Appearance							

V4 Plus W series

Capacity Range	HP	8	10	12
	kW	25.2	28.0	33.5
Appearance				

V4 Plus R series

Capacity Range	HP	8	10	12	14	16
	kW	25.2	28.0	33.5	40.0	45.0
Appearance						

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Overview
V4 Plus S Series
V4 Plus W Series
V4 Plus R Series
Indoor Units Lineup
Control System
HRV
Branch Pipe

Overview

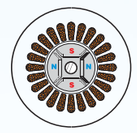
MDV VRF air conditioner has a number of key technologies which improve performance and save energy. Here are the main technologies which create the perfect cooling/heating performance, enhance comfort and reliability and easy installation.

High efficiency DC inverter compressor

MDV VRF air conditioner achieves the industry's top class energy efficiency of cooling EER and heating COP by utilizing the brushless reluctance DC compressor control, improved performance heat exchanger by innovative design and numerous high performance key parts. High efficiency DC inverter compressor reduces power consumption by 25%.

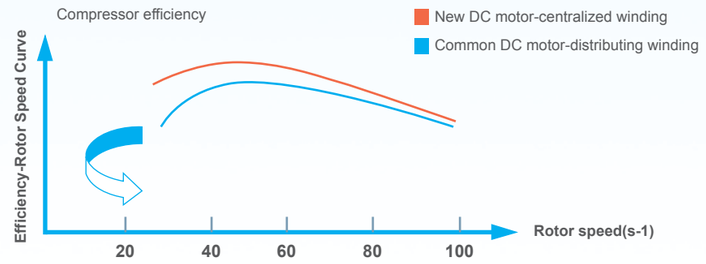
- New structure enhances mid-frequency performance
- Specially designed scroll profile for R410A
- More compact, weight reduced by 50%
- Advanced permanent magnet DC motor improves low-frequency band performance

Powerful magnets provide high torque and efficiency and achieve 70% reduction in volume.



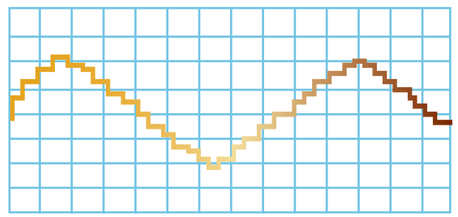
Centralizing winding

Distributing winding

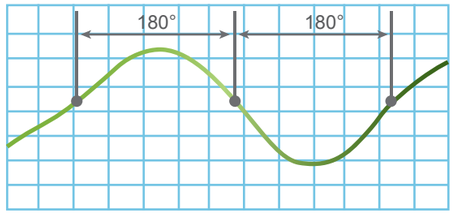


Smooth 180° sine wave DC inverter

Smooth the rotation of the compressor motor, improve the compressor operation efficiency sharply.
Effectively control the harmonic current and electromagnetic noise, and fully pass the international EMC test.



Common Sawtooth Wave



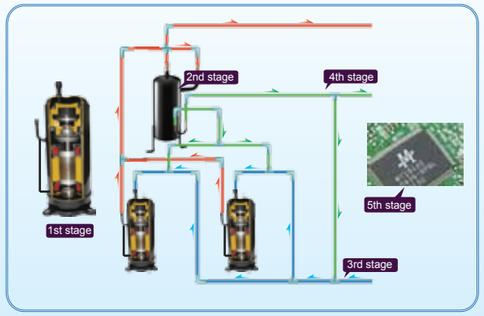
180° Sine Wave DC Inverter

Double EXV control technology

Double EXV control technology in one system, each EXV part achieves 480 pulse to adjust flow precisely. Ensure the temperature-control precisely and steadily to provide a comfortable envrionment.

High efficiency oil balance and oil return technology

5 stage oil control technology ensures every outdoor unit & compressor's oil always keep in the safe level, completely solve the compressor oil lack problem.
1st stage: compressor internal oil separate
2nd stage: high efficiency oil separator (separation efficiency up to 99%)
3rd stage: oil balance technology between compressors
4th stage: oil balance technology between modules
5th stage: intelligent system oil return program



Higher Reliability

Cycle duty operation

In one combination, any outdoor unit can run as the master outdoor unit to equalize the service of all units.

Backup operation

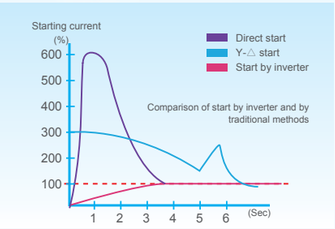
In a multiple system, when the master unit failed, any single unit can be set as the master unit，then the remaining units can keep on working.

Start backup operation

Running state
Stand by state
Fault or stop state

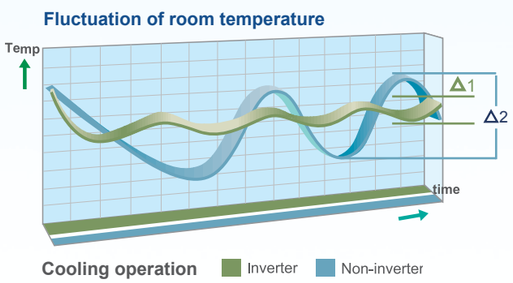
Intelligent soft start technology

DC inverter compressor soft start function reduces strike to the electric network. This kind of high-performance and low sound scroll compressor operates at a faster rate when starting, reducing start-up time. It also helps the unit to quickly adjust the room temperature to the set level.



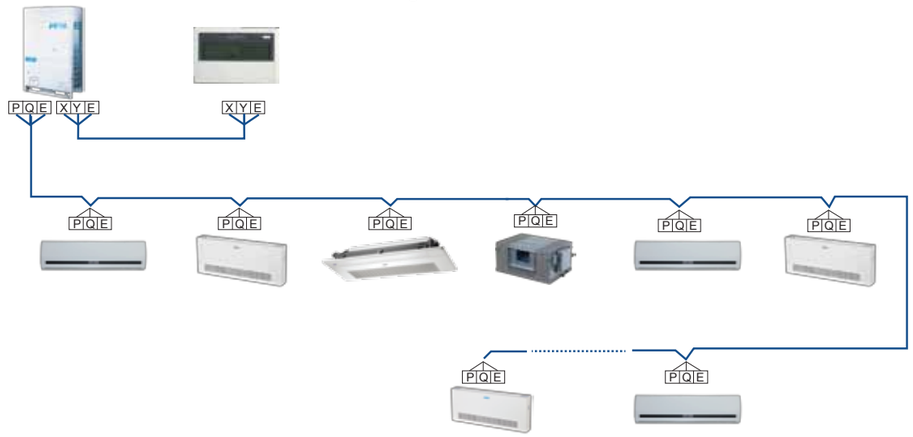
Quick warm-up & cool-down design

- By utilizing the benefits of the inverter compressor, the system can reach full load quickly and shorten the warm-up and cool-down times to provide an immediate and comfortable air solution.
- Less temperature fluctuation will create a better living environment.



Simple signal line connection

Centralized controller (CCM03 or CCM30) can be connected from indoor side or outdoor side (XYE terminals) at will. Only one group of communication wire of PQE, achieved both of communication for indoor & outdoor unit . It's more convenient for communication wiring.



V4 PLUS S Series

With all DC inverter compressors and all DC fan motors, V4 Plus S outdoor units achieve world' slargest capacity of 72HP with the industry's top class energy efficiency of cooling and heating. It supports an incredible piping length of 1000m and a longer level difference of 110m, making it perfect for big-sized and high-rise buildings for wide application.

Lineup

Model

Capacity Range	HP	8	10	12	14	16	18
	kW	25.2	28.0	33.5	40.0	45.0	50.0
Appearance							

Combination Table

Model	N°of Outdoor Units	N°of Compressors	Outdoor Unit Combination						Maximum N° of Connectable Indoor Units	Capacity	
			8HP	10HP	12HP	14HP	16HP	18HP*		Cooling	Heating
MDV-252(8)W/D2RN1(B)	1	1	1						13	25.2	27
MDV-280(10)W/D2RN1(B)	1	1		1					16	28	31.5
MDV-335(12)W/D2RN1(B)	1	2			1				20	33.5	37.5
MDV-400(14)W/D2RN1(B)	1	2				1			23	40	45
MDV-450(16)W/D2RN1(B)	1	2					1		26	45	50
MDV-500(18)W/D2RN1(B)	1	2						1	29	50	56
MDV-532(18)W/D2RN1(B)	2	2	1	1					29	53.2	58.5
MDV-560(20)W/D2RN1(B)	2	2		2					33	56	63
MDV-615(22)W/D2RN1(B)	2	3		1	1				36	61.5	69
MDV-670(24)W/D2RN1(B)	2	3		1		1			39	67	75
MDV-730(26)W/D2RN1(B)	2	3		1			1		43	73	81.5
MDV-800(28)W/D2RN1(B)	2	4				2			46	80	90
MDV-850(30)W/D2RN1(B)	2	4				1	1		50	85	95
MDV-900(32)W/D2RN1(B)	2	4					2		53	90	100
MDV-960(34)W/D2RN1(B)	3	4		2		1			56	96	108
MDV-1010(36)W/D2RN1(B)	3	4		2			1		59	101	113
MDV-1065(38)W/D2RN1(B)	3	5		1	1		1		63	106.5	119
MDV-1130(40)W/D2RN1(B)	3	5		1		1	1		64	113	126.5
MDV-1200(42)W/D2RN1(B)	3	6				3			64	120	135
MDV-1250(44)W/D2RN1(B)	3	6				2	1		64	125	140
MDV-1300(46)W/D2RN1(B)	3	6				1	2		64	130	145
MDV-1350(48)W/D2RN1(B)	3	6					3		64	135	150
MDV-1432(50)W/D2RN1(B)	4	6	1	1			2		64	143.2	158.5
MDV-1460(52)W/D2RN1(B)	4	6		2			2		64	146	163
MDV-1515(54)W/D2RN1(B)	4	7		1	1		2		64	151.5	169
MDV-1580(56)W/D2RN1(B)	4	7		1		1	2		64	158	176.5
MDV-1650(58)W/D2RN1(B)	4	8				3	1		64	165	185
MDV-1700(60)W/D2RN1(B)	4	8				2	2		64	170	190
MDV-1750(62)W/D2RN1(B)	4	8				1	3		64	175	195
MDV-1800(64)W/D2RN1(B)	4	8					4		64	180	200
MDV-1835(66)W/D2RN1(B)	4	8			1			3	64	183.5	205.5
MDV-1900(68)W/D2RN1(B)	4	8				1		3	64	190	213
MDV-1950(70)W/D2RN1(B)	4	8					1	3	64	195	218
MDV-2000(72)W/D2RN1(B)	4	8						4	64	200	224

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C(80.6°F) DB/19°C(66.2°F) WB; Outdoor temperature 35°C(95°F) DB
Heating: Indoor temperature 20°C(68°F) DB/15°C(59°F) WB; Outdoor temperature 7°C(44.6°F) DB
Piping length: Interconnecting piping length 7.5m, level difference of zero.
The above models combination are factory-recommended models.
*The recommended combination larger than 64HP adopt 5 basic models since 18HP model can be customized.
The above recommended combination will be changed at that time.

Features

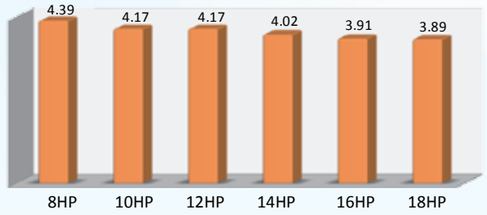
High Efficiency

V4 PLUS S Series with high efficiency DC compressors, DC motors and high efficient heat exchanger, achieve the world's Top Class energy efficiency. The cooling EER up to 4.29 and the heating COP up to 4.39 in the 8HP category.

High EER/COP values

EER

COP

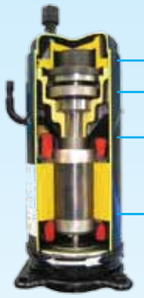


All DC inverter compressors

8HP and 10HP models are equipped with one DC inverter compressor and 12, 14, 16, 18HP models are equipped with two.

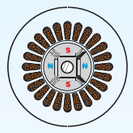
All DC inverter compressors make the capacity output better distributed, and always work at 60-140Hz which is the most efficient range. It makes the efficiency more than 30% higher than the normal.

All DC Inverter

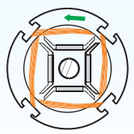


- New structure enhances mid-frequency performance
- Specially designed scroll profile for R410A
- More compact, weight reduced by 50%
- Advanced permanent magnet DC motor improves the low frequency band performance

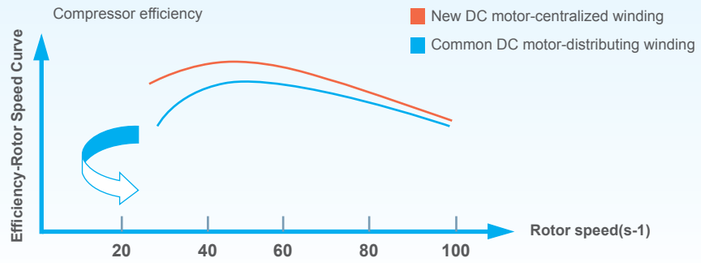
Powerful magnets provide high torque and efficiency and achieve 70% reduction in volume.



Centralizing winding



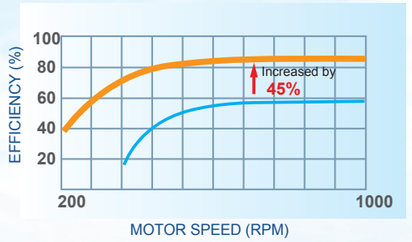
Distributing winding

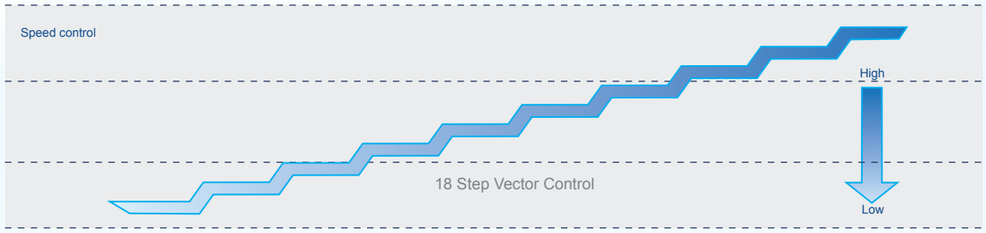


All DC fan motors

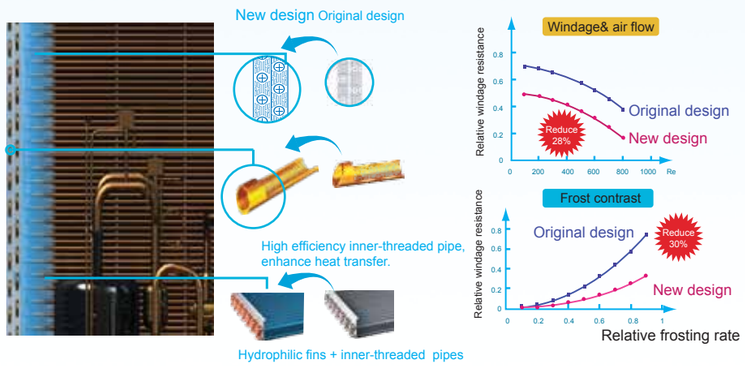
According to the running load and pressure, it controls the speed of DC fan to achieve the min. power consumption.

- Used across entire range of models (from 8 to 72 HP).
- Efficiency improvement by up to 45% especially at low speed.
- Wide speed adjustment with 18 steps vector control.

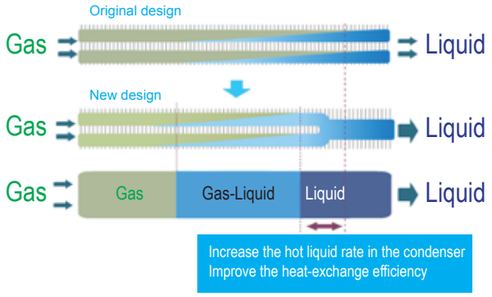


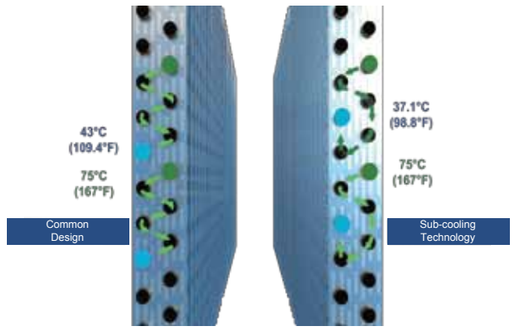


High performance heat exchanger



- The new designed window fins enlarge the heat-exchanging area , decrease the air resistance, save more power and enhance heat exchange performance.
- Hydrophilic fins and inner-threaded copper pipes optimize heat exchange efficiency.



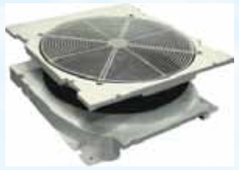


- Innovative designed high efficiency heat exchanger, which can reach up to 12°C subcooling degree, reduces the system resistance and improves reliability.
- When the outdoor temperature is 35°C, the refrigerant can be cooled down to 37.1°C, thus achieving high heat-exchanging efficiency with only 2.1°C temperature difference.

Fan grille

Optimized fan blade shape with new air outlet grille enhanced air volume which greatly improves fan performance and decreases noise.
Also, a higher external static pressure has been achieved optionally from 20 Pa to 40 Pa.

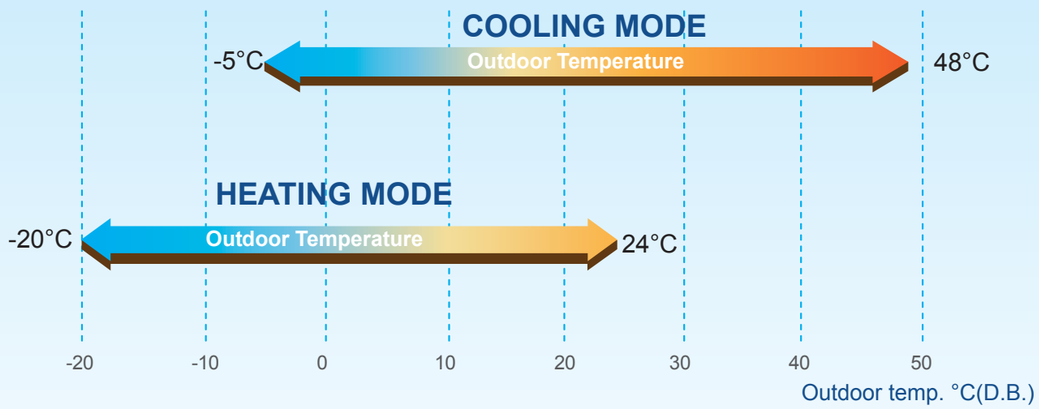
(60Pa is available for 12HP)



New fan blade profile

A new blade with sharp edges and a slight curve increases the airflow rate and lowers vibration and airflow resistance.

Wide operation range



The V4 Plus S Series system operates stably at extreme temperatures ranging from minus 20°C to 48°C.

Wide Application Range

Large capacity for big sized building

The outdoor units capacity range from 8HP up to 72HP in 2HP increment. Maximum 64 indoor units with capacity up to 130% of total outdoor units can be connected in one refrigeration system.

8, 10HP

12, 14, 16HP

18HP

18, 20, 22, 24, 26, 28, 30, 32HP

34,36, 38, 40, 42, 44, 46, 48HP

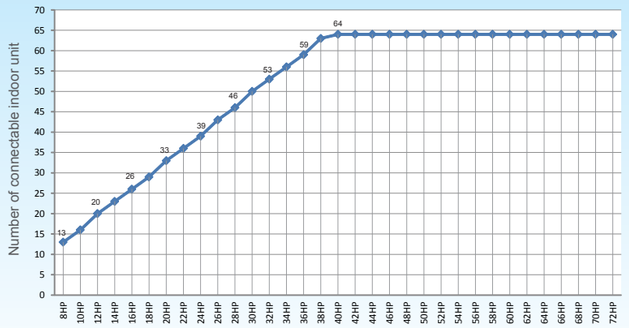
50, 52, 54, 56, 58, 60, 62, 64HP

66, 68, 70, 72HP

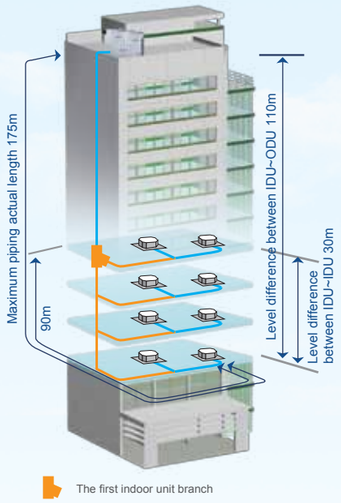
*18HP model can be customized.

More connectable indoor units.

The high number of connectable units is suitable for large buildings and projects.



Long piping length


Maximum piping actual length 175m
90m
Level difference between IDU~ODU 110m
Level difference between IDU~IDU 30m
The first indoor unit branch

The solution supports an incredible piping length of 1,000m and level difference of 110m, making it perfect for large projects.

			Permitted value
Piping length	Total pipe length*(Actual)		1000m
	Maximum piping(L)	Actual length	175m
		Equivalent length	200m
Level difference	Equivalent piping length from the farthest IDU to the first indoor branch joint		40m/90m*
	Level difference between IDU~ODU	Outdoor unit up	70m
		Outdoor unit down	110m
	Level difference between IDU~IDU		30m

*Total pipe length is equal to two times — pipe length plus — pipe length.
*When the farthest pipe length is more than 40m. It needs to meet the specific condition according to the installation part of the techinical manual.

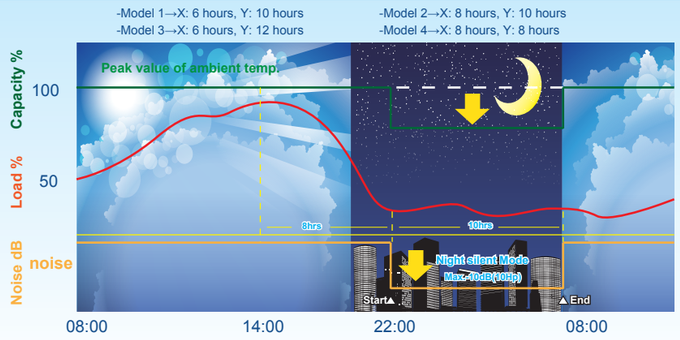
Extra high static pressure – Max. 60Pa and air volume increased by 10%

The high static pressure propeller and optimized fan guard can adapt to various installation environments.
MDV now offers up to 60Pa* external static pressure units for customized applications (60Pa is available for the 12HP model, 40Pa is available for other models).
A standard 0-20Pa function is equipped by default.

Enhanced Comfort

Night silent operation mode

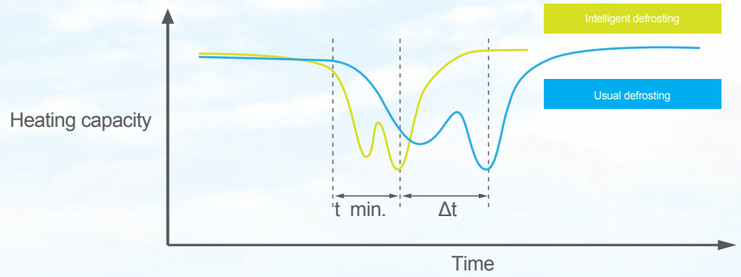
MDV's night silent mode feature which is easily set on the PCB board allows the unit to be set to varies time options during Non Peak and Peak operation time optimizing the units noise output.
Super silent operation mode can reduce sound level further, minimum 45dB (A).
Night silent operation will be activated X hours after the peak temperature during daytime, and it will go back to normal operation after Y hours.



Notes: This function can be activated by setting at site. Temperature(load) curve shown in the graph is just an example.

Intelligent defrosting raises heat capacity

Intelligent defrosting program to judge the defrosting time according to the system real requirement, reduce the heating loss by unnecessary defrosting and make the indoor side more comfortable. Every time defrosting last only 4 min. due to the use of specialized defrosting valve.

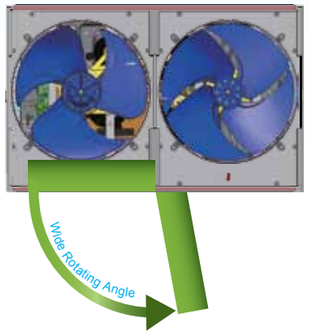


Easier Installation and Service

Auto addressing

Outdoor unit can distribute address for each indoor unit automatically.
Wireless and wired controllers can enquire and modify each indoor unit's address.

Easy access



* Rotating Control box is available for 18HP model which with G-shape Condenser.

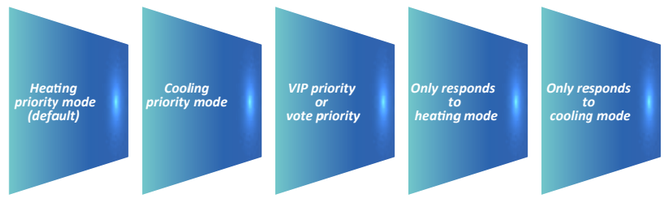
Newly designed rotating control box is so excellent that it can rotate in a wide angle. It is convenient for inspection and maintenance of the pipeline system and greatly reduces the time of dismount the electric control box.

Reserved checking window on electric control box for convenient spot checking and status enquiry.

Self-diagnosis function helps service engineers locate faults quickly and easily.

Various locking modes

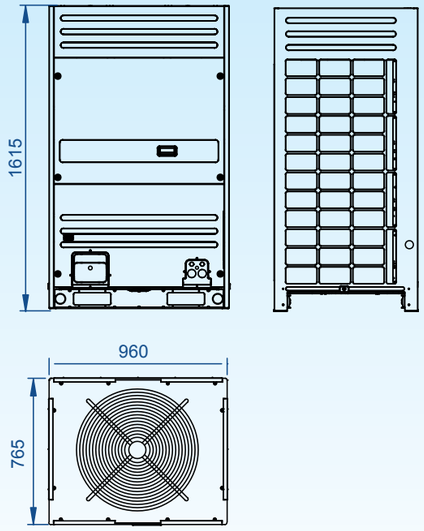
Various locking modes enhance convenience for users.
In VIP priority or vote priority mode, the address of the VIP unit should be set as 63. If there is no 63 unit, it will respond to vote priority.


Heating priority mode (default)
Cooling priority mode
VIP priority or vote priority
Only responds to heating mode
Only responds to cooling mode

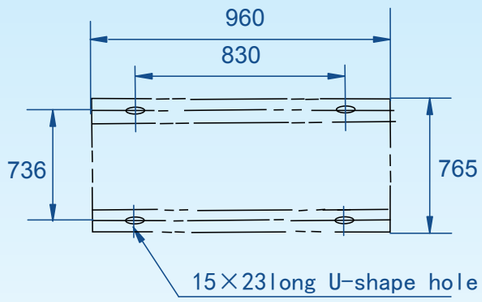
Dimensions

8, 10 HP

Unit: mm

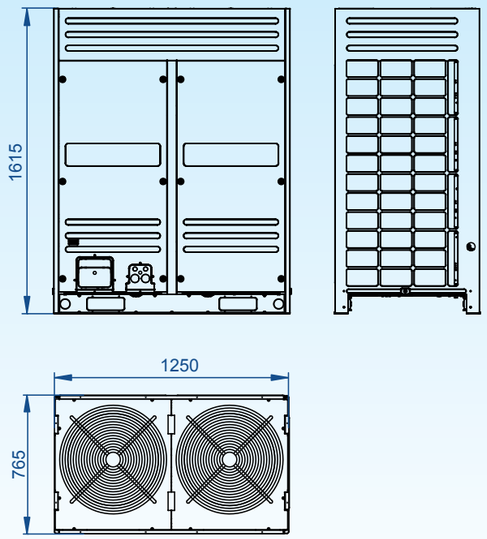


■ Position illustration of screw bolts (Unit: mm)

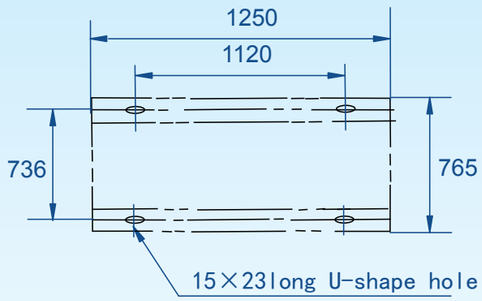


12, 14, 16, 18 HP

Unit: mm



■ Position illustration of screw bolts (Unit: mm)



Outdoor Unit

V4 Plus S Series
MDV-252(8)W/D2RN1(B)
MDV-280(10)W/D2RN1(B) MDV-335(12)W/D2RN1(B)

Specifications

Model			MDV-252(8)W/D2RN1(B)	MDV-280(10)W/D2RN1(B)	MDV-335(12)W/D2RN1(B)
Power supply		V/Ph/Hz	380-415/3/50		
Cooling	Capacity	kW	25.2	28.0	33.5
		RT	7.2	8.0	9.5
	Power input	kW	5.88	7.05	8.79
	EER	kW/kW	4.29	3.97	3.81
Heating	Capacity	kW	27.0	31.5	37.5
		RT	7.7	9.0	10.7
	Power input	kW	6.15	7.554	8.993
	COP	kW/kW	4.39	4.17	4.17
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130
	Max. quantity		13	16	20
Sound pressure level		dB(A)	57	57	59
Pipe connections	Liquid pipe	mm	Φ9.53	Φ9.53	Φ12.7
	Gas pipe	mm	Φ22.2	Φ22.2	Φ25.4
	Oil balance pipe	mm	Φ6	Φ6	Φ6
Fan motor	Type		DC	DC	DC
	Quantity		1	1	1+1
	Air flow rate	m³/h	11,242	11,242	13,000
	Motor output	W	750	750	560+380
	ESP	Pa	0-20(default)	0-20(default)	0-20(default)
		Pa	20-40(customized)	20-40(customized)	20-60(customized)
DC inverter compressor	Quantity		1	1	1+1
	Capacity	W	31,590	31,590	31,590+11,800
	Crankcase heater	W	27.6×2	27.6×2	27.6×2×2
	Oil type		FVC68D	FVC68D	FVC68D
	Oil charge	ml	500	500	500+500
Refrigerant	Type		R410A	R410A	R410A
	Factory charging	kg	10	10	12
Design pressure (High/Low)		MPa	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)		mm	960×1,615×765	960×1,615×765	1,250×1,615×765
Packing size (W×H×D)		mm	1,025×1,790×830	1,025×1,790×830	1,305×1,790×820
Net weight		kg	212	212	288
Gross weight		kg	227	227	308
Operating temperature range	Cooling	°C	-5-48		
	Heating	°C	-20-24		

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

Outdoor Unit

V4 Plus S Series
MDV-400(14)W/D2RN1(B)
MDV-450(16)W/D2RN1(B) MDV-500(18)W/D2RN1(B)

Specifications

Model			MDV-400(14)W/D2RN1(B)	MDV-450(16)W/D2RN1(B)	MDV-500(18)W/D2RN1(B)
Power supply		V/Ph/Hz	380-415/3/50		
Cooling	Capacity	kW	40.0	45.0	50.0
		RT	11.4	12.8	14.2
	Power input	kW	11.30	13.25	14.79
	EER	kW/kW	3.54	3.40	3.38
Heating	Capacity	kW	45.0	50.0	56.0
		RT	12.8	14.2	15.9
	Power input	kW	11.19	12.79	14.40
	COP	kW/kW	4.02	3.91	3.89
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130
	Max. quantity		23	26	29
Sound pressure level		dB(A)	61	62	62
Pipe connections	Liquid pipe	mm	Φ12.7	Φ12.7	Φ15.9
	Gas pipe	mm	Φ25.4	Φ28.6	Φ28.6
	Oil balance pipe	mm	Φ6	Φ6	Φ6
Fan motor	Type		Axial propeller	Axial propeller	Axial propeller
	Quantity		1+1	1+1	1+1
	Air flow rate	m³/h	15,620	15,620	15,620
	Motor output	W	560+380	560+380	560+380
	ESP	Pa	0-20(default)	0-20(default)	0-20(default)
		Pa	20-40(customized)	20-40(customized)	20-40(customized)
DC inverter compressor	Quantity		1+1	1+1	1+1
	Capacity	kW	31.59+11.8	31.59+11.8	31.59+11.8
	Crankcase heater	W	27.6×2×2	27.6×2×2	27.6×2×2
	Oil type		FVC68D	FVC68D	FVC68D
	Oil charge	ml	500+500	500+500	500+500
Refrigerant	Type		R410A	R410A	R410A
	Factory charging	kg	15	15	17
Design pressure (High/Low)		MPa	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)		mm	1,250×1,615×765	1,250×1,615×765	1,250×1,615×765
Packing size (W×H×D)		mm	1,305×1,790×820	1,305×1,790×820	1,305×1,790×820
Net weight		kg	288	288	310
Gross weight		kg	308	308	330
Operating temperature range	Cooling	°C	-5-48		
	Heating	°C	-20-24		

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.
*18HP model can be customized.

V4 PLUS W Series

The MDV V4 Plus W Series is the perfect combination of water and refrigerant systems. The main units achieve the world's largest capacity of 36HP and provide the highest energy efficiency for cooling and heating. The series boasts excellent energy saving features, flexible system design and maximized comfort. In addition to traditional cooling towers/ boilers, there are more water source options including river water, soil, solar energy, sea water, lake water, ground water, waste heat from production, sewage or waste water.

Lineup

Model

Capacity Range	HP	8	10	12
	kW	25.2	28.0	33.5
Appearance				

Combination Table

Model	N°of Main Units	N°of Compressors	Main Unit Combination			Maximum N° of Connectable Indoor Units	Capacity	
			8HP	10HP	12HP		Cooling	Heating
MDVS-252(8)W/DRN1	1	1	1			13	25.2	27
MDVS-280(10)W/DRN1	1	1		1		16	28	31.5
MDVS-335(12)W/DRN1	1	1			1	20	33.5	37.5
MDVS-504(16)W/DRN1	2	2	2			26	50.4	54
MDVS-532(18)W/DRN1	2	2	1	1		29	53.2	58.5
MDVS-560(20)W/DRN1	2	2		2		33	56	63
MDVS-615(22)W/DRN1	2	2		1	1	36	61.5	69
MDVS-670(24)W/DRN1	2	2			2	39	67	75
MDVS-784(26)W/DRN1	3	3	2	1		43	78.4	85.5
MDVS-812(28)W/DRN1	3	3	1	2		46	81.2	90
MDVS-840(30)W/DRN1	3	3		3		50	84	94.5
MDVS-895(32)W/DRN1	3	3		2	1	53	89.5	100.5
MDVS-950(34)W/DRN1	3	3		1	2	56	95	106.5
MDVS-1005(36)W/DRN1	3	3			3	59	100.5	112.5

Notes:
Capacities are based on the following conditions:
Cooling: indoor temp.: 27°C DB(80.6°F), 19°C WB(66.2°F), main unit ambient temp.: 35°C DB(95°F), water inlet temp. :30°C(86°F), equivalent pipe length: 5m, level difference: 0m.
Heating: indoor temp.: 20°C DB(68°F), 15°C WB(59°F), main unit ambient temp.: 7°C DB(44.6°F), 6℃WB(42.8°F), water inlet temp. :20°C(68°F), equivalent pipe length: 5m drop length: 0m.
Main unit water inlet flow: 2.7~8.1m³/h(8HP), 3~9m³/h(10HP), 3.6~10.8m³/h(12HP).
The above model combinations are factory-recommended models.

Features

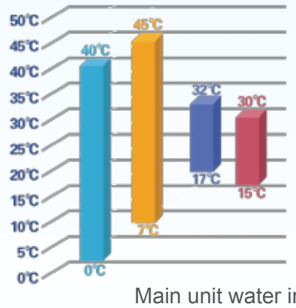
Wide Application Range

Unit combinations

The main units capacity range from 8HP up to 36HP. Maximum 59 indoor units with capacity up to 130% of total main units can be connected in one refrigeration system.

8, 10,12HP	16, 18, 20,22,24HP	26,28,30,32,34,36HP

Wide operation range



Main unit ambient temperature: 0°C~40°C

Main unit water inlet temperature: 7°C~45°C

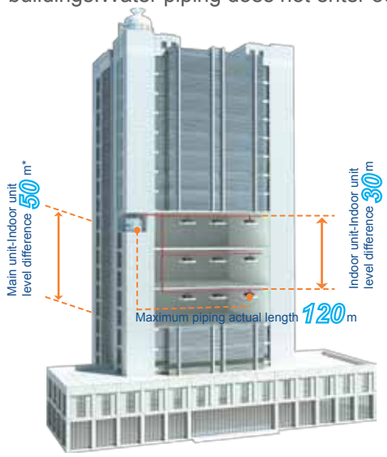
Indoor temperature:
cooling: 17°C~32°C

Indoor temperature:
heating: 15°C~30°C

Main unit water inlet flow: 2.7~8.1m³/h(8HP), 3~9m³/h(10HP), 3.6~10.8m³/h(12HP).

Long piping length

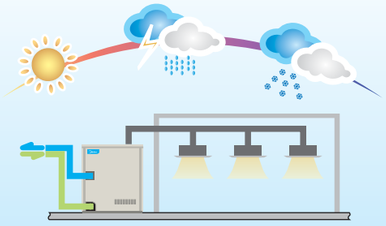
In the refrigerant piping system, total piping length can extend up to 300m with a longest piping actual length of 120m and a level difference between indoor unit and outdoor units of 50m. The maximum pressure at the water side can be as high as 1.96Mpa (200m height difference), enabling a flexible design in high-rise buildings.Water piping does not enter occupied spaces, so there is little chance of water leaks.


Main unit-Indoor unit level difference 50m*
Indoor unit-Indoor unit level difference 30m
Maximum piping actual length 120m

			Permitted value
Piping length	Total piping length(Actual)		300m
	Maximum piping(L)	Actual length	120m
		Equivalent length	150m
Level difference	Piping (farthest from the first line pipe branch) equivalent length		40/90m*
	Indoor unit-main unit level difference	Main unit up	50m
		Main unit down	40m
	Indoor unit to indoor unit level difference		30m

*The allowable length can extend to 90m under certain conditions.
Please refer to the service manual for details.

Climate-resistant units

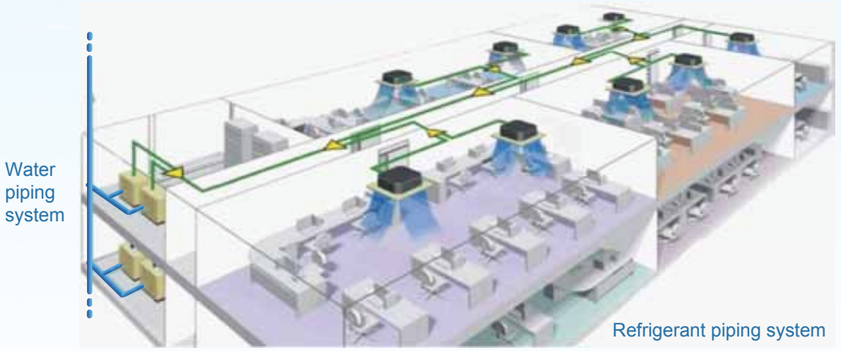


Due to the stable source of water as the cold/heat source of the system, the air conditioning capacity is not affected by environmental temperature.
When heating in winter, the unit does not implement the frost/defrosting process, which stabilizes and strengthens the heating effect.

Higher Reliability

No water leakage

No water pipe installed indoors, no water leakage risks.



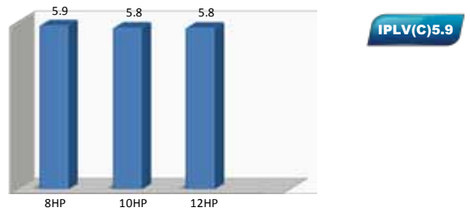
High Efficiency

High efficiency double-pipe heat exchanger

With the innovative designed double-pipe heat exchanger, the water quality required is low. The water side has large circulation area, and it is not easy to get stuck, higher reliability, easy to clean and maintain.

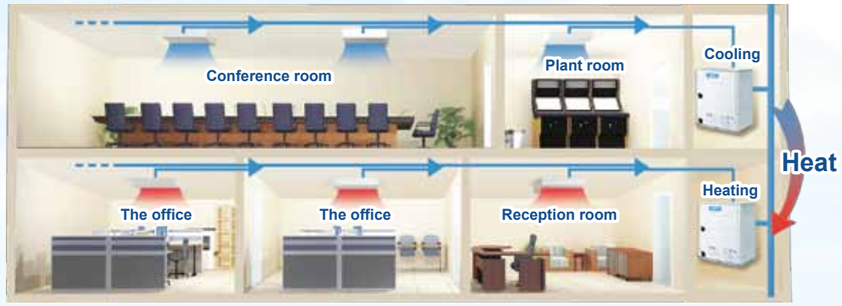
High IPLV

MDV V4 Plus W Series System combines water system and refrigerant system perfectly. IPLV(C) reaches as high as 5.9. Compared with air-cooled V4 Plus, it saves much energy.



Water side heat recovery function

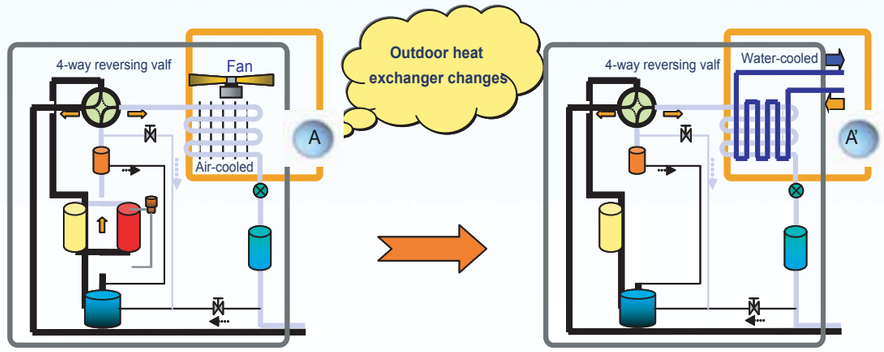
In the modern large-scale buildings, the load between the internal and external areas is different. It may occur situations that both cooling and heating are required. The V4 PLUS W series modular design, not only can realize meticulous system division in different areas but also can realize heat recovery at the same time, significantly improved energy efficiency.



ENHANCED COMFORT

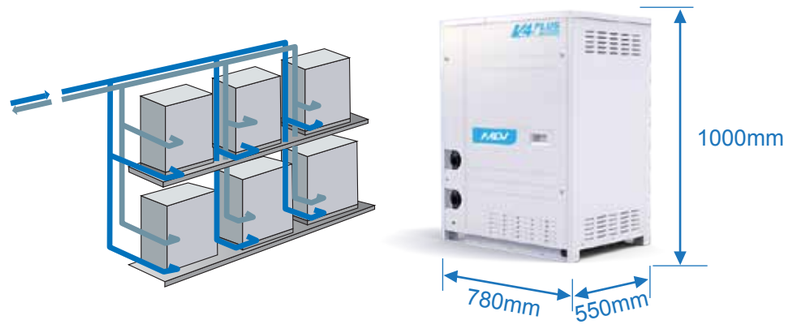
Low noise

Without outdoor units fan noise and fully enclosed design which realize lower noise.



Modular design

Compact design and low weight. It can be transported through the elevator or forklift.
The modular design enables one main unit to be installed above another, which greatly saves space.
Various installation environments include warehouses, basements, closed balconies, corridors, and factories.



More Intelligent

Various locking modes

A range of available modes can meet a wide variety of user needs.

Heating priority mode (default)
Cooling priority mode
First on indoor unit priority mode
Only responds to heating mode
Only responds to cooling mode

Easier Installation and Service

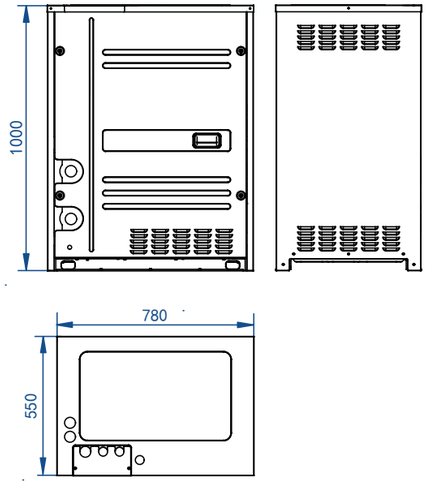
Easy access

The checking window on electric control box for convenient spot checking and status enquiry.

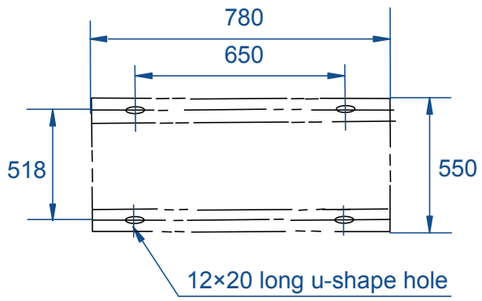
Compressor is located near the door, which simplifies checks and enables valve or compressor parts to be replaced easily.

Dimensions

(Unit: mm)



■ Position illustration of screw bolts (Unit: mm)



Main Unit

V4 Plus W Series
MDVS-252(8)W/DRN1
MDVS-280(10)W/DRN1 MDVS-335(12)W/DRN1

Specifications

Model			MDVS-252(8)W/DRN1	MDVS-280(10)W/DRN1	MDVS-335(12)W/DRN1
Power supply		V/Ph/Hz	380-415/3/50		
Cooling	Capacity	kW	25.2	28.0	33.5
		RT	7.2	8.0	9.5
	Power input	kW	4.80	6.10	8.00
	EER	kW/kW	5.25	4.59	4.19
Heating	Capacity	kW	27.0	31.5	37.5
		RT	7.7	9.0	10.7
	Power input	kW	4.45	5.83	7.80
	COP	kW/kW	6.07	5.4	4.81
IPLV©			5.90	5.8	5.8
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130
	Max. quantity		13	16	20
Sound pressure level		dB(A)	51	52	52
Pipe connections	Liquid pipe	mm	Φ12.7	Φ12.7	Φ15.9
	Gas pipe	mm	Φ25.4	Φ25.4	Φ31.8
	Oil balance pipe	mm	Φ6	Φ6	Φ6
	Drainage pipe outside diameter	mm	Φ10	Φ10	Φ10
	Water side connecting pipe	mm	DN32 inner groove	DN32 inner groove	DN32 inner groove
DC inverter compressor	Quantity		1	1	1
	Capacity	W	31,590	31,590	31,590
	Crankcase heater	W	27.6×2	27.6×2	27.6×2
	Oil type		FVC68D	FVC68D	FVC68D
	Oil charge	ml	500	500	500
Heat exchanger	Type		Double-pipe heat exchanger		
	Rated water flow volume	m³/h	5.4	6	7.2
	Pressure drop	kPa	35	40	48
	Max.pressure of water pipe side	Mpa	1.98	1.98	1.98
Refrigerant	Type		R410A	R410A	R410A
	Factory charging	kg	2	2	2
Design pressure (High/Low)		MPa	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)		mm	780×1,000×550	780×1,000×550	780×1,000×550
Packing dimension(W×H×D)		mm	845×1,170×600	845×1,170×600	845×1,170×600
Net weight		kg	146	146	146
Gross weight		kg	155	155	155
Main unit water inlet temperature		°C	7-45		
Main unit ambient temperature range		°C	0-40		
Main unit ambient humidity			Below 80%		

Notes:
1.Nominal conditions

	Indoor	Main unit ambient temp.	Water inlet temperature	Pipe length	Level difference
Cooling	27°C DB(80.6°F), 19°C WB(66.2°F)	35°C DB(95°F)	30°C DB(86°F)	5m	0m
Heating	20°C DB(68°F)	7°C DB(44.6°F)/6°C WB(42.8°F)	20°C DB(68°F)	5m	0m

2.Sound level: Anechoic chamber conversion value, measured at a position 1m in front of the unit and 1m above the floor.
3.Main unit water inlet flow: 2.7~8.1m³/h(8HP), 3~9m³/h(10HP), 3.6~10.8m³/h(12HP).
4.Due to continued product improvements, the above specifications may change without prior notice.

V4 PLUS R Series

The all DC inverter V4 Plus heat recovery series, which can offers simultaneous cooling and heating operation in one system. The energy by-product from cooling or heating is transferred to where it is required by using the balanced heat exchanger function, which saves up to 50% in costs compared with a conventional heat pump system.

Offers simultaneous cooling and heating operation in one system

Recommended combination table

Model	N° of Outdoor Units	N° of Compressors	Outdoor Unit Combination					Maximum N° of Connectable	Capacity	
			8HP	10HP	12HP	14HP	16HP		Cooling	Heating
MDV-252(8)W/D2RN1T(C)	1	1	1					13	25.2	27
MDV-280(10)W/D2RN1T(C)	1	1		1				16	28	31.5
MDV-335(12)W/ D2RN1T(C)	1	1			1			20	33.5	37.5
MDV-400(14)W/ D2RN1T(C)	1	2				1		23	40	45
MDV-450(16)W/ D2RN1T(C)	1	2					1	26	45	50
MDV-532(18)W/D2RN1T(C)	2	2	1	1				29	53.2	58.5
MDV-560(20)W/D2RN1T(C)	2	2		2				33	56	63
MDV-615(22)W/D2RN1T(C)	2	2		1	1			36	61.5	69
MDV-680(24)W/D2RN1T(C)	2	3		1		1		39	68	76.5
MDV-730(26)W/D2RN1T(C)	2	3		1			1	43	73	81.5
MDV-800(28)W/D2RN1T(C)	2	4				2		46	80	90
MDV-850(30)W/D2RN1T(C)	2	4				1	1	50	85	95
MDV-900(32)W/D2RN1T(C)	2	4					2	53	90	100
MDV-960(34)W/D2RN1T(C)	3	4		2		1		56	96	108
MDV-1010(36)W/D2RN1T(C)	3	4		2			1	59	101	113
MDV-1065(38)W/D2RN1T(C)	3	4		1	1		1	63	106.5	119
MDV-1130(40)W/D2RN1T(C)	3	5		1		1	1	64	113	126.5
MDV-1200(42)W/D2RN1T(C)	3	6				3		64	120	135
MDV-1250(44)W/D2RN1T(C)	3	6				2	1	64	125	140
MDV-1300(46)W/D2RN1T(C)	3	6				1	2	64	130	145
MDV-1350(48)W/D2RN1T(C)	3	6					3	64	135	150
MDV-1432(50)W/D2RN1T(C)	4	6	1	1			2	64	143.2	158.5
MDV-1460(52)W/D2RN1T(C)	4	6		2			2	64	146	163
MDV-1515(54)W/D2RN1T(C)	4	6		1	1		2	64	151.5	169
MDV-1580(56)W/D2RN1T(C)	4	7		1		1	2	64	158	176.5
MDV-1650(58)W/D2RN1T(C)	4	8				3	1	64	165	185
MDV-1700(60)W/D2RN1T(C)	4	8				2	2	64	170	190
MDV-1750(62)W/D2RN1T(C)	4	8				1	3	64	175	195
MDV-1800(64)W/D2RN1T(C)	4	8					4	64	180	200

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°CWB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°CDB/6 °CWB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
The above combinations are factory-recommended.

Features

Wide Application Range

Wide range of outdoor units

The outdoor units' capacity range from 8HP up to 64HP in 2HP increment. Maximum 64 indoor units with capacity up to 130% of total outdoor units can be connected as one refrigeration system.

8, 10, 12, 14, 16HP

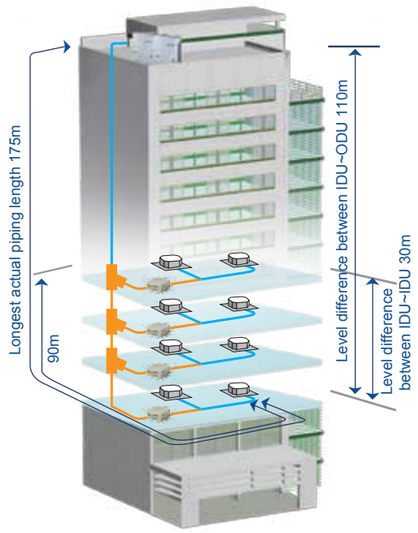
18-32HP

34-48HP

50-64HP

Long piping length

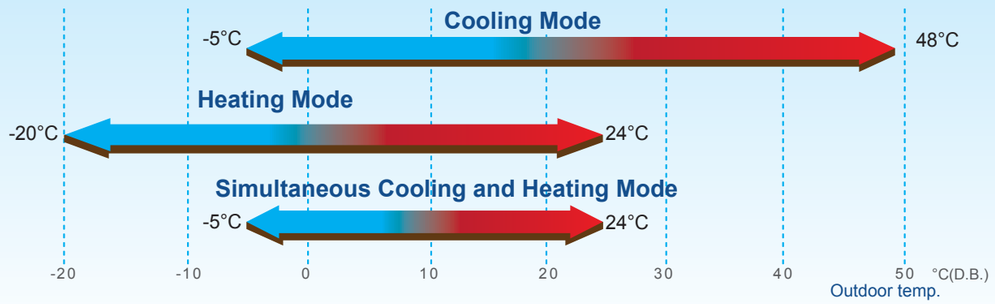
The solution supports an incredible piping length of 1,000m and level difference of 110m, making it perfect for large projects.



			Permitted value
Piping length	Total piping length*1 (Actual)		1000m
	Longest piping	Actual length	175m
		Equivalent length	200m
	Equivalent piping length from the farthest IDU to the first indoor branch joint		40m/90m*2
	Equivalent piping length from MS to its downstream indoor unit		40m
Level difference	Level difference between IDU~ODU	Outdoor unit up	70m
		Outdoor unit down	110m
	Level difference between IDU~IDU		30m

*1 Total pipe length is equal to two times — pipe length plus — pipe length.
*2 When the farthest pipe length is more than 40m. It needs to meet the specific conditions according to the installation part of the technical manual.

Wide operation temperature range

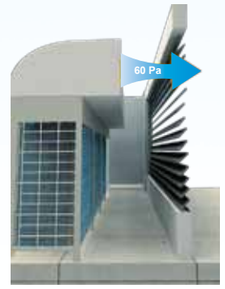


No matter in extremely cold winter when outdoor temperature down to as low as -20°C or in hot summer when temperature is up to 48°C, the V4 Plus R series system will keep stable operation.

High external static pressure

Max. 60Pa external static pressure can be customized for the outdoor unit, flexible to build-in installation.

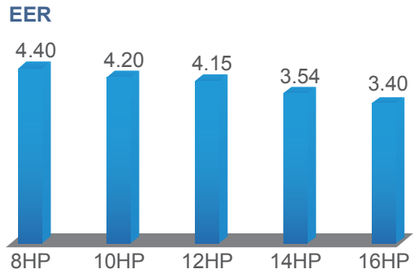
A standard 0-20Pa external static pressure is equipped by default for all outdoor units. 0-40Pa external static pressure can be customized for 14, 16HP outdoor units, and 0-60Pa can be customized for 8, 10, 12HP outdoor unit.

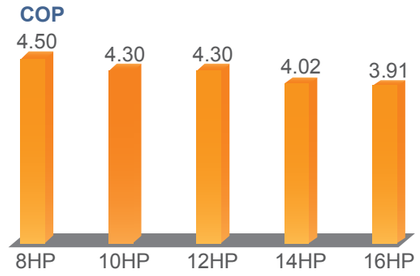


High Efficiency

High COP/EER values

The cooling EER up to 4.40 and the heating COP up to 4.50 in the 8HP catagory.





All DC inverter technology

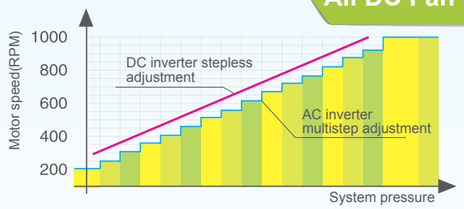
All DC inverter compressors make the capacity output better distributed, and always work at 60-140Hz which is the most efficient range. It makes the efficiency more than 30% higher than the normal.

All DC Inverter Compressors

- New structure enhances mid-frequency performance
- Specially designed scroll profile for R410A
- More compact, weight reduced by 50%
- Advanced permanent magnet DC motor improves the low frequency band performance

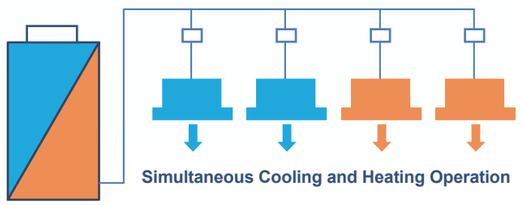
According to the running load and system pressure, the system controls the speed of DC fan to achieve the minimum energy consumption and best performance.

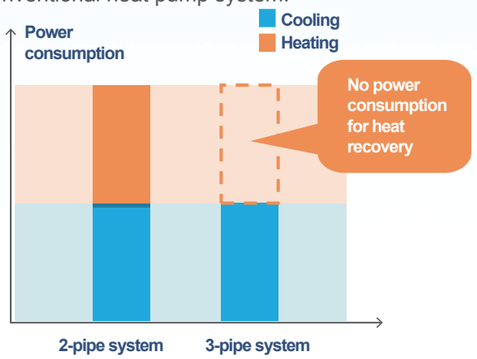
All DC Fan Motors



Heat recovery, more efficiency

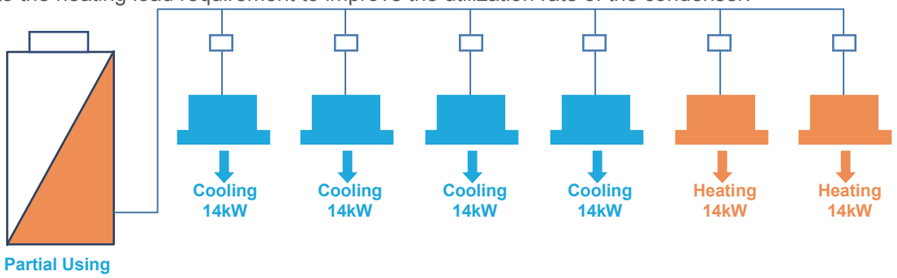
Simultaneous heating and cooling in different zones, more energy saving by heat recovery from one space to another which saves up to 50% in costs compared with a conventional heat pump system.





Heating capacity automatic adjustment

Two parts condenser individual design, the unit can distribute a part of evaporator to be as condensing area according to the heating load requirement to improve the utilization rate of the condenser.



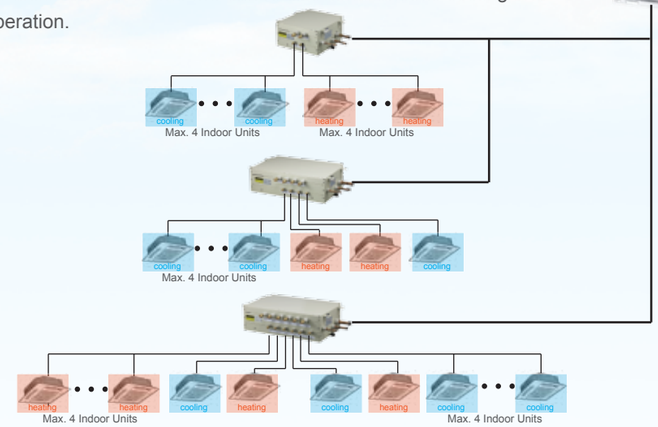
Enhanced Comfort

Cooling and heating simultaneous

Simultaneous cooling and heating achieved for new designed MS (Mode Switch) equipment.

The outdoor unit individual controls the operation mode of each group indoor unit to achieve simultaneous heating and cooling in one system under the MS equipment which adopts solenoid valve to precise control refrigerant flow rate.

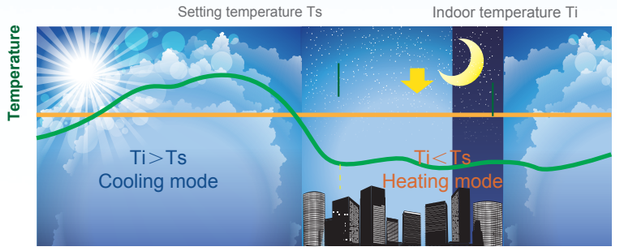
The indoor units connect to one MS can realize simultaneous cooling and heating operation.



Auto mode control

At the auto mode, the indoor unit can change the operation mode, to control the indoor side temperature at a constant temperature demanded.

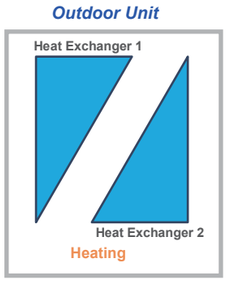
Unit change to cooling mode at daytime, when indoor temperature is higher than setting temperature, and change to heating mode at nighttime, when indoor temperature is lower than setting temp.

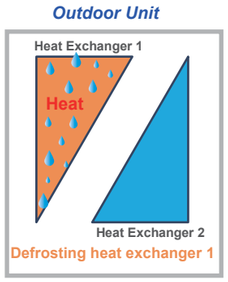


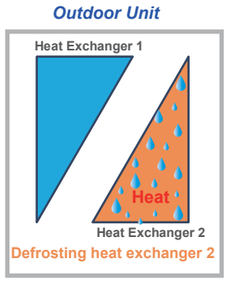
Mode change automatically

Continuous heating during defrost operation

Each heat exchanger is defrosted by using heat transferred from one heat exchanger to the other in the outdoor unit. Defrost has no impact on the indoor unit on heating mode.







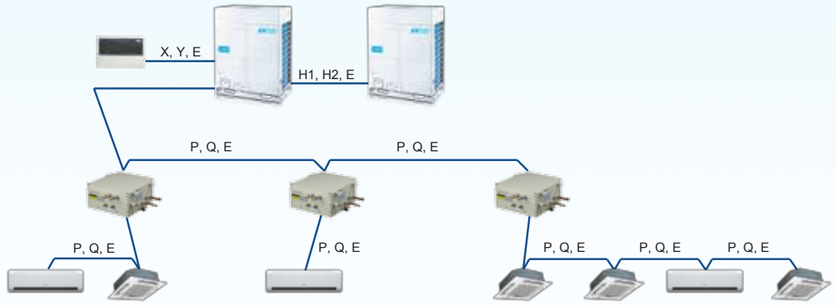
Easier Installation and Service

Remote addressing

Addressing indoor units are able to be done just by pressing the button of the controller.
No need to set the address by the DIP switch one by one.
Wired controller and wireless controller can enquire and modify every indoor units address.

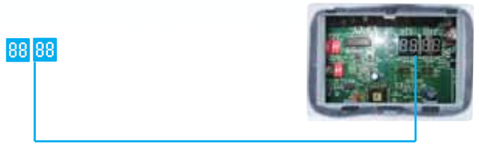
Simple communication wiring

Centralized controller (CCM03) can connect from indoor side or outdoor side (XYE terminals) at will. Only one group of communication wire of PQE, achieved both of communication for indoor & outdoor unit and network. It's more convenient for communication wiring.

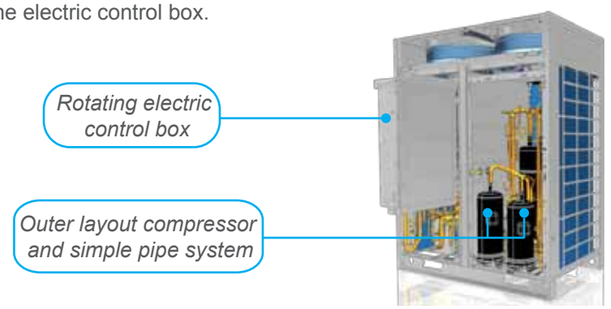


Professional structure design for easy maintainence

The check window reserved on electric control box provides a convenient spot checking and status enquiry. With the 4 bits digital tube LED display, it is very convenient to show the data of the system, such as pressure, compressor frequency, error code, discharge temperature etc., which can make the maintenance, installation and commissioning easier.



Compressor is near the outside, and there is simple pipe system for convenient maintenance.
The newly designed rotating control box is so excellent that it can rotate in a wide angle.
It is convenient for the inspection and maintenance of the pipeline system and greatly reduced the time of dismount the electric control box.



Specifications

V4+R Series
MDV-252(8)W/D2RN1T(C)
MDV-280(10)W/D2RN1T(C) MDV-335(12)W/D2RN1T(C)
MDV-400(14)W/D2RN1T(C) MDV-450(16)W/D2RN1T(C)

Model			MDV-252(8) W/D2RN1T(C)	MDV-280(10) W/D2RN1T(C)	MDV-335(12) W/D2RN1T(C)	MDV-400(14) W/D2RN1T(C)	MDV-450(16) W/D2RN1T(C)
Power supply		V/Ph/Hz	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	25.2	28.0	33.5	40.0	45.0
		RT	7.2	8.0	9.5	11.4	12.8
	Power input	kW	5.73	6.67	8.07	11.30	13.24
	EER	kW/kW	4.40	4.20	4.15	3.54	3.40
Heating	Capacity	kW	27.0	31.5	37.5	45.0	50.0
		RT	7.7	8.9	10.7	12.8	14.2
	Power input	kW	6.00	7.33	8.72	11.19	12.79
	COP	kW/kW	4.50	4.30	4.30	4.02	3.91
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130	50-130	50-130
	Max. quantity		13	16	20	23	26
Sound pressure level		dB(A)	57	57	58	60	60
Pipe connections	Liquid pipe	mm	Φ9.53	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Low pressure gas pipe	mm	Φ22.2	Φ22.2	Φ25.4	Φ28.6	Φ28.6
	High pressure gas pipe	mm	Φ19.1	Φ19.1	Φ19.1	Φ22.2	Φ22.2
	High pressure gas balance pipe	mm	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1
	Oil balance pipe	mm	Φ6	Φ6	Φ6	Φ6	Φ6
Fan motor	Type		DC	DC	DC	DC	DC
	Quantity		2	2	2	2	2
	Air flow rate	m³/h	12,000	12,000	13,000	15,000	15,000
	Motor output	W	420	420	420	750	750
	ESP	Pa	0-20 (default)	0-20 (default)	0-20 (default)	0-20 (default)	0-20 (default)
		Pa	20-60 (customized)	20-60 (customized)	20-60 (customized)	20-40 (customized)	20-40 (customized)
DC inverter compressor	Quantity		1	1	1	2	2
	Capacity	kW	31.59	31.59	31.59	31.59+11.8	31.59+11.8
	Crankcase heater	W	30×2	30×2	30×2	30×4	30×4
	Oil type		FVC68D	FVC68D	FVC68D	FVC68D	FVC68D
	Oil charge	ml	500	500	500	500+500	500+500
Refrigerant	Type		R410A	R410A	R410A	R410A	R410A
	Factory charging	kg	10	10	10	13	13
Design pressure (High/Low)		MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)		mm	1250×1615×765	1250×1615×765	1250×1615×765	1250×1615×765	1250×1615×765
Packing size (W×H×D)		mm	1305×1790×820	1305×1790×820	1305×1790×820	1305×1790×820	1305×1790×820
Net weight		kg	255	255	255	303	303
Gross weight		kg	273	273	273	322	322
Operating temperature range	Cooling	°C	-5-48				
	Heating	°C	-20-24				
	Simultaneous Cooling and Heating	°C	-5~24				

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C(80.6°F) DB/19°C(66.2°F) WB; Outdoor temperature 35°C(95°F) DB/24°C(75.2°F) WB.
Heating: Indoor temperature 20°C(68°F) DB/15°C(59°F) WB; Outdoor temperature 7°C(44.6°F) DB/6°C(42.8°F) WB.
Piping length: Interconnecting piping length is 7.5m(24.6ft.), level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m(295.2ft.). When the total equivalent liquid length is more than 90m(295.2ft.), please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m(3.28ft.) in front of the unit and 1.3m(4.264ft.) above the floor.

MS Specifications

MS equipment which can be connected multiple indoor units

MS02/N1-C

MS04/N1-C MS06/N1-C

Model				MS02/N1-C	MS04/N1-C	MS06/N1-C
Max. indoor unit groups				2	4	6
Max. number of each group indoor units				4	4	4
Max. number of all downstream indoor units				4×2=8	4×4=16	4×6=24
Max. capacity of each group indoor units			kW	16	16	16
			kBtu/h	54.6	54.6	54.6
Total capacity of all downstream indoor units			kW	≤28	≤45	≤45
			kBtu/h	≤95.5	≤153.5	≤153.5
Piping connections	Connect to outdoor unit	Liquid pipe	mm	12.7	15.9	15.9
		High pressure gas pipe	mm	19.1	22.2	22.2
		Low pressure gas pipe	mm	25.4	31.8	31.8
	Connect to indoor unit	Liquid pipe	mm	9.53	9.53	9.53
		Gas pipe	mm	15.9	15.9	15.9
Net dimension (W×H×D)			mm	630×225×600	960×225×600	960×225×600
Packing dimension (W×H×D)			mm	725×325×685	1055×325×685	1055×325×685
Net weight			kg	19.5	31	35
Gross weight			kg	27	40	44.5

MS equipment which can be connected only one indoor unit

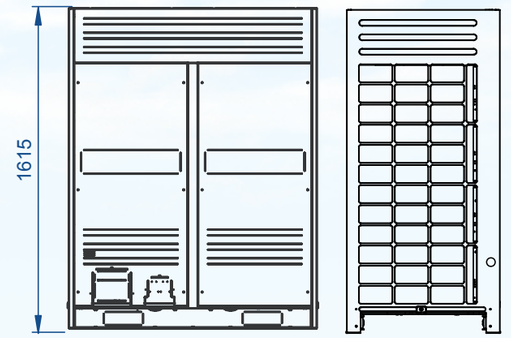
MS02E/N1-C MS04E/N1-C

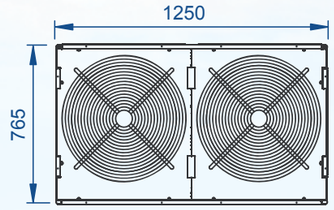
Model				MS02E/N1-C	MS04E/N1-C
Max. number of all downstream indoor units				1	1
Capacity of downstream indoor unit			kW	20~28	40~56
			kBtu/h	68.2~95.5	136.5~191.1
Piping connections	Connect to outdoor unit	Liquid pipe	mm	12.7	15.9
		High pressure gas pipe	mm	19.1	22.2
		Low pressure gas pipe	mm	25.4	31.8
	Connect to indoor unit	Liquid pipe	mm	9.53	9.53
		Gas pipe	mm	15.9	15.9
Net dimension (W×H×D)			mm	630×225×600	960×225×600
Packing dimension (W×H×D)			mm	725×325×685	1055×325×685
Net weight			kg	19.5	31
Gross weight			kg	27	40

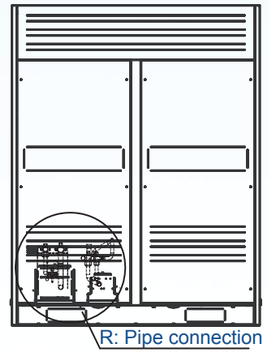
Dimensions

Body dimension

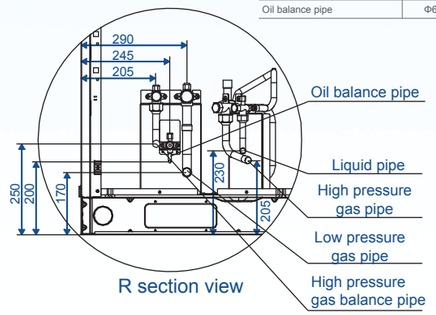
Unit: mm





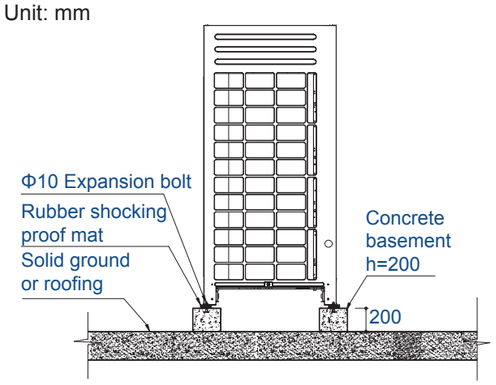


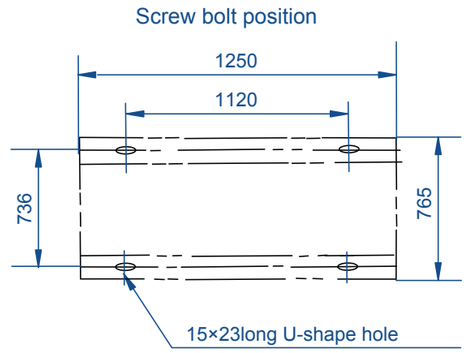
HP / SIZE	8/10	12	14/16
Liquid pipe	Φ12.7	Φ15.9	Φ15.9
Low pressure gas pipe	Φ22.2	Φ25.4	Φ28.6
High pressure gas pipe	Φ19.1	Φ19.1	Φ22.2
High pressure gas balance pipe	Φ19.1	Φ19.1	Φ19.1
Oil balance pipe	Φ6	Φ6	Φ6



Installation dimension

Unit: mm



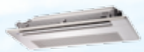


V4 Plus R Series

Indoor Units Lineup →

Indoor Units Lineup

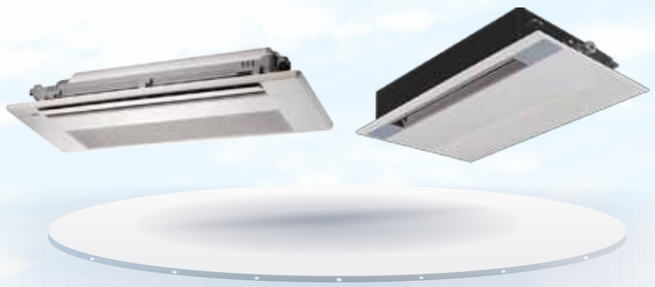
- One-way Cassette
- Two-way Cassette
- Compact Four-way Cassette
- Four-way Cassette
- Concealed Duct Unit (A5 Type)
- High Static Pressure Duct
- Ceiling & Floor
- Wall mounted
- Floor Standing
- Console
- Fresh Air Processing Unit

Type		Model (capacity *100)	15	18	22	28	36	45	56	71	80	90	100	112	125	140	160	200	250	280	400	450	560
One-way Cassette	MDV-D XX Q1/N1-D			●	●	●	●																
	MDV-D XX Q1/N1-C							●	●														
Two-way Cassette	MDV-D XX Q2/N1				●	●	●	●	●	●													
Compact Four-way Cassette	MDV-D XX Q4/N1-A3		●		●	●	●	●															
Four-way Cassette	MDV-D XX Q4/N1-D					●	●	●	●	●	●	●	●	●		●							
Concealed Duct Unit(A5 Type)	MDV-D XX T2/N1-BA5										●	●		●		●							
	MDV-D XX T2/N1-DA5		●		●	●	●	●	●	●													
High Static Pressure Duct	MDV-D XX T1/N1-B									●	●	●		●									
																●	●						
																		●	●	●			
																					●	●	●
Ceiling & Floor	MDV-D XX DL/N1-C						●	●	●	●	●	●		●		●	●						
Wall mounted	MDV-D XX G/N1-S MDV-D XX G/DN1-S		●		●	●	●	●	●														
	MDV-D XX G/N1YB MDV-D XX G/DN1YB				●	●	●	●	●														
	MDV-D XX G-R3/N1Y									●	●	●											
	MDV-D XX G/N1Y-11D5				●	●	●	●	●	●													
Floor Standing	MDV-D XX Z/N1-F3B				●	●	●	●	●	●	●												
	MDV-D XX Z/N1-F4(F5)				●	●	●	●	●	●	●												
Console	MDV-D XX Z/DN1-B				●	●	●	●															
Fresh Air Processing Unit	MDV-D XX T1/N1-FA														●	●							
																		●	●	●			

11 types and more than 100 models are available to meet varied customer requirements.

Indoor Units Lineup

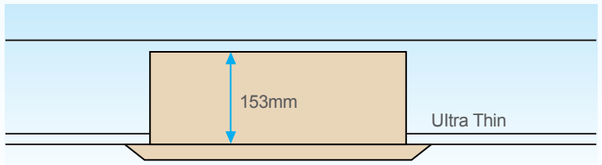
One-way Cassette



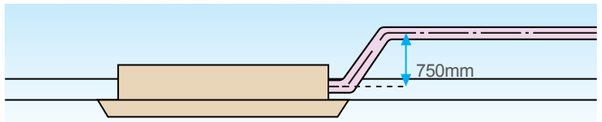
- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- LED Display
- Super High Air Flow
- Built-in Drain Pump

Only 153mm thickness

Compact design,ultra slim body with a minimum thickness of 153mm for model 18-36,especially suitable for narrow ceiling , such as in lobbies and small meeting rooms.

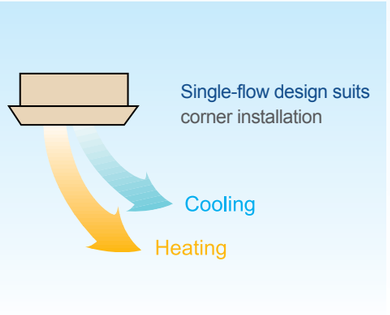


Standard built-in drain pump with 750mm pump head.



Auto swing

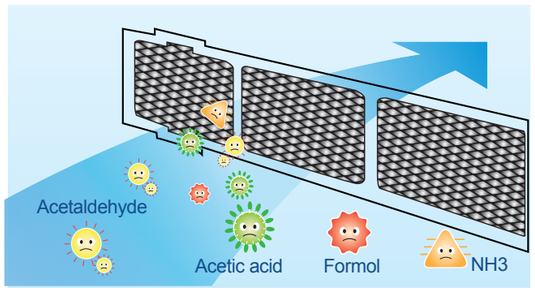
Auto swing mechanism guarantees even airflow distribution and a better room temperature balance.



Fresh air, improved air quality

Reserved fresh air intake port for high quality air creates a comfortable and healthy environment.

Special enzyme sterilization and filtering technologies filter bacteria, smog, and pollen. Provide a clean, healthy and natural air supply.



Model			MDV-D18Q1 /N1-D	MDV-D22Q1 /N1-D	MDV-D28Q1 /N1-D	MDV-D36Q1 /VN1-D	MDV-D45Q1 /N1-C	MDV-D56Q1 /N1-C
Power supply			1-phase,220-240V,50Hz					
Cooling capacity		kW	1.8	2.2	2.8	3.6	4.5	5.6
		kcal/h	1500	1900	2400	3100	3900	4800
		Btu/h	6100	7500	9600	12300	15400	19100
Heating capacity		kW	2.2	2.6	3.2	4	5	6.3
		kcal/h	1900	2200	2800	3400	4300	5400
		Btu/h	7500	8900	10900	13600	17100	21500
Rated input	Cooling	W	41	41	41	41	80	85
	Heating		41	41	41	41	80	85
Rated current	Cooling	A	0.24	0.24	0.25	0.25	0.37	0.39
	Heating		0.24	0.24	0.25	0.25	0.37	0.39
Airflow rate(H/M/L)		m³/h	523/404/275	523/404/275	573/456/315	573/456/315	704/630/503	860/810/702
		CFM	308/238/162	308/238/162	337/268/185	337/268/185	414/370/296	506/476/413
Sound pressure level(H/M/L)		dB(A)	37/34/30	38/34/30	39/37/34	40/38/34	41/39/35	42/40/36
Refrigerant		Type	R410A					
		Control method	EXV					
Indoor Unit	Net dim.(W×H×D)	mm	1054×169×425				1147×200×640	
	Gross dim.(W×H×D)		1155×245×490				1380×265×775	
	NetGross	kg	12.5/16		13/16.5		31.5/37.2	
Panel	Net dim.(W×H×D)	mm	1180×25×465		1180×25×465		1425×10×755	
	Gross dim.(W×H×D)		1232×107×517		1232×107×517		1500×110×870	
	NetGross	kg	3.5/5.2		3.5/5.2		9/12	
Piping connections	L(flare)	mm	Φ6.35		Φ6.35		Φ6.35	Φ9.53
	G(flare)	mm	Φ12.7		Φ12.7		Φ12.7	Φ16
	Drain piping	mm	OD Φ25		OD Φ25		OD Φ25	
Standard Controller			Wireless remote controller RM05/BG(T)E-A/E)					

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB,19°CWB,outdoor temperature:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB,outdoor temperature: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the unit.

Two-way Cassette

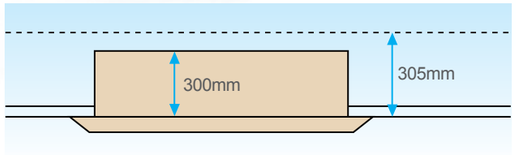
- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- LED Display
- Super High Air Flow
- Built-in Drain Pump

Quiet operation

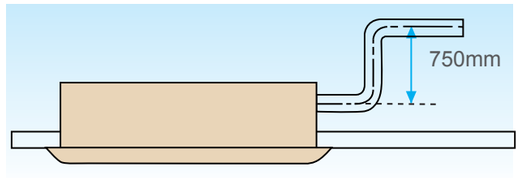
Optimized airflow duct with low resistance greatly reduces noise, minimum down to 24dB(A).

Stylish design and slim body

Thanks to the stylish appearance and slim body, the unit suits any room's decor and ambience. At only 300mm high, the unit requires only a small suspended ceiling space. Installation has no height limitations, which makes overall design features much more flexible.



Standard built-in drain pump with 750mm pump head (higher pump head can be customized).



Flat-type suction grille design greatly simplifies maintenance work.

High airflow

High airflow for high ceiling application guarantees comfort in large space. It makes every person in the room get even distribution of airflow and temperature.

Model			MDV-D22Q2/N1	MDV-D28Q2/N1	MDV-D36Q2/N1	MDV-D45Q2/N1	MDV-D56Q2/N1	MDV-D71Q2/N1
Power supply			1-phase, 220-240V, 50Hz					
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1
		kcal/h	1,900	2,400	3,100	3,900	4,800	6,100
		Btu/h	7,500	9,600	12,300	15,400	19,100	24,200
Heating capacity		kW	2.6	3.2	4.0	5.0	6.3	8.0
		kcal/h	2,200	2,800	3,400	4,300	5,400	6,900
		Btu/h	8,900	10,900	13,600	17,100	21,500	27,300
Power input	Cooling	W	57	57	60	92	108	154
	Heating		57	57	60	92	108	154
Rated current	Cooling	A	0.35	0.45	0.45	0.55	0.55	0.75
	Heating		0.35	0.45	0.45	0.55	0.55	0.75
Airflow rate(H/M/L)		m^3/h	654/530/410	654/530/410	725/591/458	850/670/550	980/800/670	1,200/1,000/770
		CFM	385/312/241	385/312/241	427/348/270	500/394/324	577/471/394	706/589/453
Sound pressure level(H/M/L)		dB(A)	33/29/24	36/32/29	36/32/29	39/35/30	39/35/30	44/40/34
Refrigerant		Type	R410A					
		Control method	EXV					
Body	Net dim.(W×H×D)	mm	1,172×300×592	1,172×300×592	1,172×300×592	1,172×300×592	1,172×300×592	1,172×300×592
	Gross dim.(W×H×D)		1,355×400×675	1,355×400×675	1,355×400×675	1,355×400×675	1,355×400×675	1,355×400×675
	Net/gross	kg	34/42.5	34/42.5	34/42.5	36.5/45	36.5/45	36.5/45
Panel	Net dim.(W×H×D)	mm	1,430×90×680	1,430×90×680	1,430×90×680	1,430×90×680	1,430×90×680	1,430×90×680
	Gross dim.(W×H×D)		1,525×130×765	1,525×130×765	1,525×130×765	1,525×130×765	1,525×130×765	1,525×130×765
	Net/gross	kg	10.5/15	10.5/15	10.5/15	10.5/15	10.5/15	10.5/15
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)					

Notes:

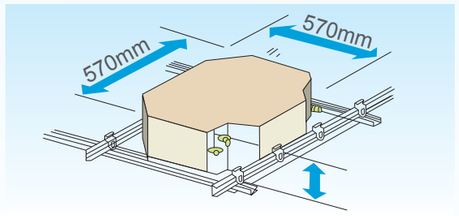
1. Nominal cooling capacities are based on the following conditions: return air temperature : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the unit.

Indoor Units Lineup

Compact Four-way Cassette

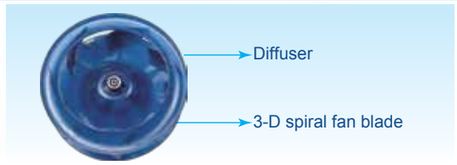
- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- Built-in Drain Pump
- LED Display
- Super High Air Flow

Compact design, easy installation and maintenance



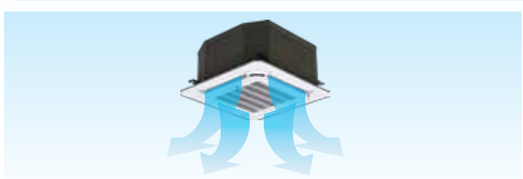
Extremely compact casing suits any room's decor and requires little space for installation on a low ceiling. Due to the compact body and light weight, all models can be installed without a hoist.

Quiet operation, gentle air supply



Streamline plate ensures quiet operation
Advanced 3-D spiral fan design reduces air resistance and operation noise.

Four-way uniform airflow

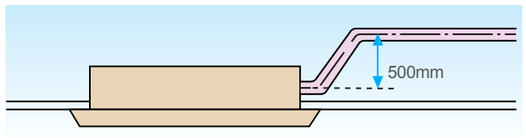


Four air discharge ports provide strong air flow circulation to cool or heat every corner of a room and evenly distribute temperature. High airflow mode can maximize the conditioning effect in rooms that are over 3m high.

360°Airflow outlet

360° air outlet provides strong air flow circulation to cool or heat every corner of a room and evenly distribute temperature.

Lift pump



Drain pump with a 500mm pump head is fitted as standard; maximum 600mm pump head is available.

Model			MDV-D15Q4/N1-A3	MDV-D22Q4/N1-A3	MDV-D28Q4/N1-A3	MDV-D36Q4/N1-A3	MDV-D45Q4/N1-A3
Power supply			1-phase,220-240V,50Hz				
Cooling capacity		kW	1.5	2.2	2.8	3.6	4.5
		kcal/h	1300	1900	2400	3100	3900
		Btu/h	5100	7500	9600	12300	15400
Heating capacity		kW	1.7	2.4	3.2	4	5
		kcal/h	1500	2100	2700	3400	4300
		Btu/h	5800	8200	10900	13600	17100
Rated input	Cooling	W	36	48	56	56	56
	Heating		36	48	56	56	56
Rated current	Cooling	A	0.22	0.22	0.22	0.25	0.25
	Heating		0.22	0.22	0.22	0.25	0.25
Airflow rate(SH/H/M/L)		m^3/h	501/435/283/208	522/414/313/238	522/414/313/238	610/521/409/314	610/521/409/314
		CFM	295/256/167/98	307/244/184/140	307/244/184/140	359/307/241/185	359/307/241/185
Sound pressure level(H/M/L)		dB(A)	34.9/32.5/22.5	35.8/33.4/23.4	35.8/33.4/23.4	41.5/35.6/28.8	41.5/35.6/28.8
Refrigerant		Type	R410A				
		Control method	EXV				
Indoor Unit	Net dim.(W×H×D)	mm	570x260x570	570x260x570	570x260x570	570x260x570	570x260x570
	Gross dim.(W×H×D)		675x285x675	675x285x675	675x285x675	675x285x675	675x285x675
	NetGross	kg	16/19.5	16/20	16/20	18/22	18/22
Panel	Net dim.(W×H×D)	mm	647x50x647	647x50x647	647x50x647	647x50x647	647x50x647
	Gross dim.(W×H×D)		715x123x715	715x123x715	715x123x715	715x123x715	715x123x715
	NetGross	kg	2.4/4.5	2.4/4.5	2.4/4.5	2.4/4.5	2.4/4.5
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7
	Drain piping	mm	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25
Standard Controller			Wireless remote controller (RM05/BG(T)E-A)				

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature : 27°CDB,19°CWB,outdoor temperature:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB,outdoor temperature: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the unit.

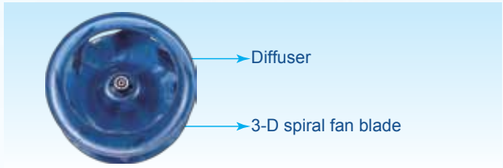
Indoor Units Lineup

Four-way Cassette

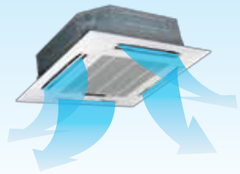
- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- Built-in Drain Pump
- LED Display
- Super High Air Flow

Quiet operation, gentle air supply

- Streamline plate ensures quiet operation.
- Advanced 3-D spiral fan design reduces air resistance and operation noise.



Four-stage fan speed



Easy troubleshooting

By adding digital tube on the display board, Error Codes can be displayed directly for troubleshooting.

Four-way uniform air flow

Four air discharge ports provide strong air flow circulation to cool or heat every corner of a room and evenly distribute temperature. High airflow mode can maximize the conditioning effect in rooms that are over 3m high.

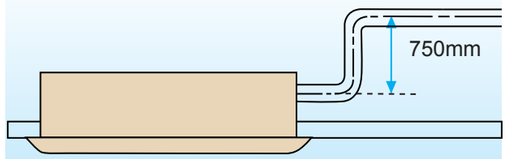
360°Airflow outlet

360° air outlet provides strong air flow circulation to cool or heat every corner of a room and evenly distribute temperature.

Reserved multi-function ports

High lift pump

Drain pump can take condenser water up to 750mm, which simplifies installation of the drain piping system.



Ultra-thin machine body (minimum height 230mm) simplifies installation and maintenance.

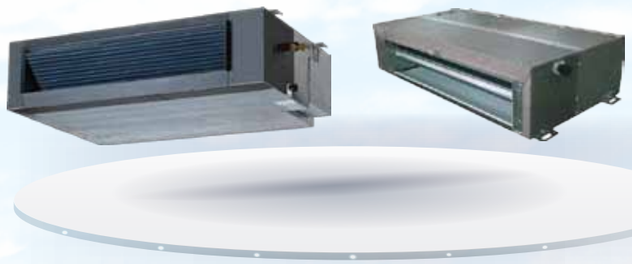
Model			MDV-D28Q4/N1-D	MDV-D36Q4/N1-D	MDV-D45Q4/N1-D	MDV-D56Q4/N1-D	MDV-D71Q4/N1-D
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	2.8	3.6	4.5	5.6	7.1
		kcal/h	2,400	3,100	3,900	4,800	6,100
		Btu/h	9,600	12,300	15,400	19,100	24,200
Heating capacity		kW	3.2	4.0	5.0	6.3	8.0
		kcal/h	2,800	3,400	4,300	5,400	6,900
		Btu/h	10,900	13,600	17,100	21,500	27,300
Power input	Cooling	W	80	80	75	75	82
	Heating		80	80	75	75	82
Rated current	Cooling	A	0.4	0.4	0.4	0.4	0.5
	Heating		0.4	0.4	0.4	0.4	0.5
Airflow rate(SH/H/M/L)		m^3/h	1,187/847/766/640	1,187/847/766/640	1,121/864/755/658	1,121/864/755/658	1,385/1,157/955/749
		CFM	699/498/450/376	699/498/450/376	660/508/444/387	660/508/444/387	815/680/562/440
Sound pressure level(H/M/L)		dB(A)	42/38/35	42/38/35	42/38/35	42/38/35	45/42/39
Refrigerant		Type	R410A				
		Control method	EXV				
Body	Net dim.(W×H×D)	mm	840×230×840	840×230×840	840×230×840	840×230×840	840×230×840
	Gross dim.(W×H×D)		955×260×955	955×260×955	955×260×955	955×260×955	955×260×955
	Net/gross	kg	24/28	24/28	26/30	26/30	26/30
Panel	Net dim.(W×H×D)	mm	950×46×950	950×46×950	950×46×950	950×46×950	950×46×950
	Gross dim.(W×H×D)		1,000×60×1,000	1,000×60×1,000	1,000×60×1,000	1,000×60×1,000	1,000×60×1,000
	Net/gross	kg	6/9	6/9	6/9	6/9	6/9
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)				

Model			MDV-D80Q4/N1-D	MDV-D90Q4/N1-D	MDV-D100Q4/N1-D	MDV-D112Q4/N1-D	MDV-D140Q4/N1-D
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	8.0	9.0	10.0	11.2	14.0
		kcal/h	6,900	7,700	8,600	9,600	12,000
		Btu/h	27,300	30,700	34,100	38,200	47,800
Heating capacity		kW	9.0	10.0	11.0	12.5	15.0
		kcal/h	7,700	8,600	9,500	10,800	12,900
		Btu/h	30,700	34,100	37,500	42,700	51,200
Power input	Cooling	W	97	160	160	160	170
	Heating		97	160	160	160	170
Rated current	Cooling	A	0.5	0.7	0.7	0.7	0.8
	Heating		0.5	0.7	0.7	0.7	0.8
Airflow rate(SH/H/M/L)		m^3/h	1,431/1,236/973/729	1,758/1,540/1,300/1,120	1,758/1,540/1,300/1,120	1,758/1,540/1,300/1,120	1,843/1,800/1,500/1,280
		CFM	842/727/572/429	1,035/906/765/659	1,035/906/765/659	1,035/906/765/659	1,085/1,059/883/753
Sound pressure level(H/M/L)		dB(A)	45/42/39	48/45/43	48/45/43	48/45/43	50/47/44
Refrigerant		Type	R410A				
		Control method	EXV				
Body	Net dim.(W×H×D)	mm	840×230×840	840×300×840	840×300×840	840×300×840	840×300×840
	Gross dim.(W×H×D)		955×260×955	955×330×955	955×330×955	955×330×955	955×330×955
	Net/gross	kg	26/30	32/37	32/37	32/37	32/37
Panel	Net dim.(W×H×D)	mm	950×46×950	950×46×950	950×46×950	950×46×950	950×46×950
	Gross dim.(W×H×D)		1,000×60×1,000	1,000×60×1,000	1,000×60×1,000	1,000×60×1,000	1,000×60×1,000
	Net/gross	kg	6/9	6/9	6/9	6/9	6/9
Piping connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)				

Notes:

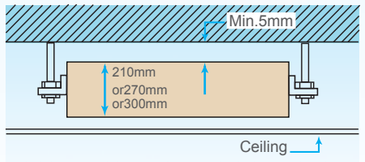
1. Nominal cooling capacities are based on the following conditions: return air temperature. : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the unit.

Concealed Duct Unit (A5 Type)



- Auto Restart
- Fresh Air
- Follow Me
- Anti-Cold Air Function
- Built-in Drain Pump
- Wired Controller
- Auto Addressing
- Cleanable Panel
- Connectable To Duct
- Super High Air Flow

Compact size



External static pressure

Four speed fan motor (Super high speed is optional)

Change the wiring connection from ‘SH’ to ‘H’ to change the ESP.

Only 210mm (15~71 models) or 270mm (80 to 112 models) or 300mm (140 model) in height.

Convenient installation

The EXV is fixed inside of the indoor unit.

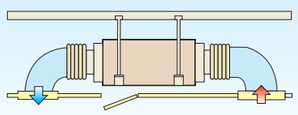
Standard filter is housed in an aluminum frame, which is removable from the bottom in the downward direction.

Suction chamber is included as standard equipment.

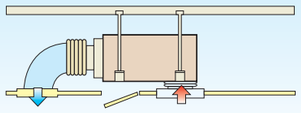
Fresh air hole, air inlet/outlet flange are standard for easy duct connection.

A rear air inlet is standard and an inlet at the bottom is optional. Both use the same connectable duct.

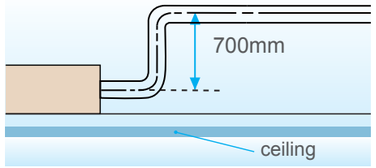
Air intake from back



Air intake from below



drain pump as standard



Flexible control and easy maintenance

Standard wired remote controller KJR-29B1/BK-E.

The electrical control box can be removed 1m away from the unit for easy maintenance access. Customers need to request this service in advance for it is done at MDV CAC factory.

Standard functional ports are included such as Remote On/Off Dry contact switch and Alarm signal output (220V).

Model			MDV-D15T2 /N1X-DA5	MDV-D22T2 /N1X-DA5	MDV-D28T2 /N1X-DA5	MDV-D36T2 /N1X-DA5	MDV-D45T2 /N1X-DA5	MDV-D56T2 /N1X-DA5
Power supply				1-phase,220-240V,50Hz				
Cooling capacity		kW	1.5	2.2	2.8	3.6	4.5	5.6
		kcal/h	1290	1900	2400	3100	3900	4800
		Btu/h	5100	7500	9600	12300	15400	19100
Heating capacity		kW	1.7	2.4	3.2	4	5	6.3
		kcal/h	1500	2100	2800	3400	4300	5400
		Btu/h	5800	8200	10900	13600	17100	21500
Rated input	Cooling	W	56	57	57	61	80	80
	Heating		56	57	57	61	80	80
Rated current	Cooling	A	0.31	0.31	0.31	0.33	0.36	0.36
	Heating		0.31	0.31	0.31	0.33	0.36	0.36
Airflow rate(SH/H/M/L)		m³/h	597/538/450/393	662/509/425/361	674/521/430/370	715/581/491/427	860/813/652/556	860/813/652/556
		CFM	351/317/265/231	390/300/250/212	397/307/253/218	421/342/289/251	506/479/384/327	506/479/384/327
EXP(external static pressure)		Pa	10(10-30)	10(10-30)	10(10-30)	10(10-30)	10(10-30)	10(10-30)
Sound pressure level(H/M/L)		dB(A)	35.8/34.6/31.4	36/35/32	37/35/32	38.6/37.5/33.8	39/37.9/34	39/37.9/34
Refrigerant		Type	R410A					
		Control method	EXV					
Indoor Unit	Net dim.(W×H×D)	mm	700×210×500	700×210×500	700×210×500	700×210×500	920×210×500	920×210×500
	Gross dim.(W×H×D)		870×285×525	870×285×525	870×285×525	870×285×525	1095×285×525	1095×285×525
	NetGross	kg	17.5/20.5	17.5/20.5	17.5/20	17.5/20	22.5/25.5	22.5/25.5
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32
Standard Controller			Wireless remote controller (KJR-29B1/BK-E)					

Model			MDV-D71T2/N1-DA5	MDV-D80T2/N1-BA5	MDV-D90T2/N1-BA5	MDV-D112T2/N1-BA5	MDV-D140T2/N1-BA5
Power Supply			220～240V-1Ph-50Hz				
Capacity	Cooling	kW	7.1	8	9	11.2	14
		kcal/h	6,100	6,900	7,700	9,600	12,000
		btu/h	24,200	27,300	30,700	38,200	47,800
	Heating	kW	8	9	10	12.5	15.5
		kcal/h	6,900	7,700	8,600	10,800	13,300
		Btu/h	27,300	30,700	34,100	42,700	52,900
Power (Cooling)	Input	W	105	198	200	313	274
	Rated Current	A	0.47	1	1	1.8	1.55
Power (Heating)	Input	W	105	198	200	313	274
	Rated Current	A	0.47	1	1	1.8	1.55
Indoor air flow (SH/H/M/L)		m³/h	1,146/1,003/903/742	1,400/1,226/1,018/861	1,400/1,230/1,019/859	1,750/1,752/1,552/1,389	1,789/1,918/1,539/1,250
		CFM	675/590/532/437	917/795/687/608	917/795/687/608	1,214/1,059/921/824	1,258/1,118/967/827
ESP (external static pressure)		Pa	10(10~30)	20(10~50)	20(10~50)	40(10~80)	40(10~100)
Sound pressure level(H/M/L)		dB(A)	41.4/39/35	45.4/39.8/37	45.4/39.8/37	48.0 /41.9/38	47.7/43.2/39.0
Refrigerant	Type		R410A				
	Control method		EXV				
Net dimension	W×H×D	mm	1,140×210×500	1,230×270×775	1,230×270×775	1,230×270×775	1,290×300×865
Packing dimension	W×H×D	mm	1,310×285×525	1,355×350×795	1,355×350×795	1,355×350×795	1,400×375×925
Net/Gross Weight		kg	28/31	38/46.5	40/48	40/48	49/58
Piping Connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	G(Flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32
Standard Controller		-	Wired controller KJR-29B1/BK-E (6m wire is standard)				

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured at 1.4m below the air out-let.

∗ External static pressure is based on high speed indoor air flow.

∗ Specifications are subject to change without prior notice for product improvement.

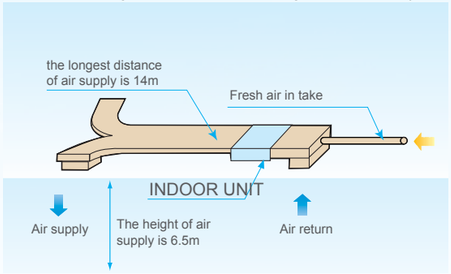
Indoor Units Lineup

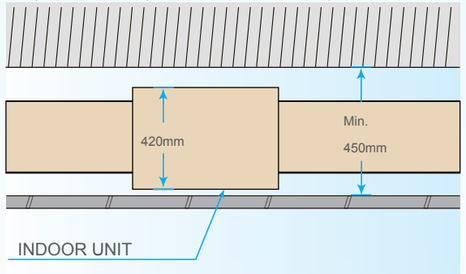
High Static Pressure Duct

- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- Wired Controller
- Connectable To Duct

Flexible duct design

Four speed fan motor (super high speed as an option for models 70-160)
External static pressure can be up to 196Pa (models 71 to 160) or 250Pa (models 200 to 560).





The maximum distance for air supply is about 14m at height of 6.5m.
With a 420mm (models 71 to 160) thick body, the minimum distance required above the ceiling is 450mm.

Greater flexibility with the four-speed fan

Exchange the wiring connections for ‘MH’ and ‘Me’ (models 71 to 160).

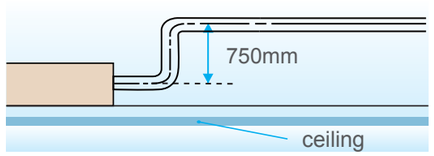
Convenient installation

The EXV is fixed inside the indoor unit (models 70-160), requires no extra connection.
Standard filter is housed in an aluminum frame, which is removable from the bottom in the downward direction.
Flange for air in/outlet duct connection is standard.

Flexible control and convenient for maintenance

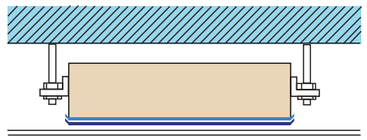
Wired remote controller KJR-29B1/BK-E is as standard, and wireless remote controller RM05/BG(T)E-A is as an option.
The display board is connected to the E-box in factory, easier troubleshooting by LED display.
Easy access filters both at the rear & bottom
Standard functional port such as remote on/off dry contact.

Option



Drain pump with 750mm pump head is optional (models 71 to 160)

Double-skin drainage pan



Double-skin drainage pan provide double protection for ceilings (models 71 to 160 and models 400 to 560)

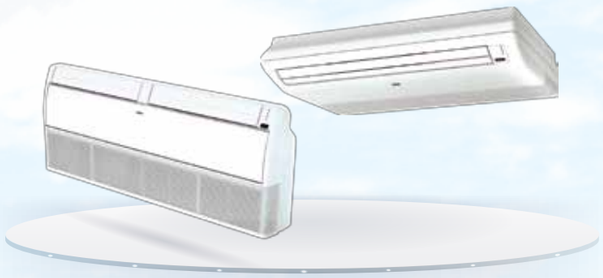
Model			MDV-D71T1/N1-B	MDV-D80T1/N1-B	MDV-D90T1/N1-B	MDV-D112T1/N1-B	MDV-D140T1/N1-B	MDV-D160T1/N1-B
Power Supply			220～240V-1Ph-50Hz					
Capacity	Cooling	kW	7.1	8	9	11.2	14	16
		kcal/h	6,100	6,900	7,700	9,600	12,000	13,800
		Btu/h	24,200	27,300	30,700	38,200	47,800	54,600
	Heating	kW	8	9	10	12.5	16	18
		kcal/h	6,900	7,700	8,600	10,800	13,800	15,500
		Btu/h	27,300	30,700	34,100	42,700	54,600	61,400
Power (Cooling)	Input	W	263	263	423	524	724	940
	Rated Current	A	1.1	1.1	1.8	2.3	2.7	3.6
Power (Heating)	Input	W	263	263	423	524	724	940
	Rated Current	A	1.1	1.1	1.8	2.3	2.7	3.6
Indoor air flow (H/M/L)		m^3/h	1,400/1,330/1,210	1,400/1,330/1,210	1,940/1,830/1,515	2,115/1,940/1,520	3,000/2,615/2,230	3620/3060/2740
		CFM	824/783/712	824/783/712	1,142/1,077/892	1,245/1,142/895	1,766/1,539/1,313	2130/1801/1613
ESP (external static pressure)		Pa	40(30~ 196)	40(30~ 196)	40(30~ 196)	50(30~ 196)	50(30~ 196)	50(30~ 196)
Sound pressure level(H/M/L)		dB(A)	48/46/44	48/46/44.5	52/49/47	52/49/47	53/50/48	54/52/50
Refrigerant	Type		R410A					
	Control method		EXV					
Net dimension	W×H×D	mm	952×420×690	952×420×690	952×420×690	952×420×690	1,200×400×600	1,200×400×600
Packing dimension	W×H×D	mm	1,090×440×768	1,090×440×768	1,090×440×768	1,090×440×768	1,436×450×768	1,436×450×768
Net/Gross Weight		kg	45/50	45/50	46.5/52.4	50.6/56	68/70	70/77.5
Piping Connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32
Standard Controller		-	Wired controller KJR-29B1/BK-E (6m wire is standard)					

Model			MDV-D200T1/N1-B	MDV-D250T1/N1-B	MDV-D280T1/N1-B	MDV-D400T1/N1	MDV-D450T1/N1	MDV-D560T1/N1
Power Supply			220～240V-1Ph-50Hz					
Capacity	Cooling	kW	20	25	28	40	45	56
		kcal/h	17,200	21,500	24,100	34,400	38,700	48,200
		Btu/h	68,200	85,300	95,500	136,500	153,500	191,100
	Heating	kW	22.5	26	31.5	45	50	63
		kcal/h	19,400	22,400	27,100	38,700	43,000	54,200
		Btu/h	76,800	88,700	107,500	153,500	170,600	214,960
Power (Cooling)	Input	W	1516	1516	1516	2700	2700	3400
	Rated Current	A	6.6	6.6	6.6	12.5	12.5	15.5
Power (Heating)	Input	W	1516	1516	1516	2700	2700	3400
	Rated Current	A	6.6	6.6	6.6	12.5	12.5	15.5
Indoor air flow (H/M/L)		m^3/h	4,665/4,320/3,625	4,665/4,320/3,625	4,665/4,320/3,625	7,490/6,120/5,050	7,490/6,120/5,050	9,625/8,050/6,630
		CFM	1, 509×550×990	2,746/2,543/2,134	2,746/2,543/2,134	4,409/3,602/2,972	4,409/3,602/2,972	5,665/4,738/3,902
ESP (external static pressure)		Pa	140(50~250)	140(50~250)	140(50~250)	196(50~250)	196(50~250)	196(50~250)
Sound pressure level(H/M/L)		dB(A)	59/55/52	59/55/52	59/55/52	61/59/56	61/59/56	63/60/57
Refrigerant	Type		R410A					
	Control method		EXV					
Net dimension	W×H×D	mm	1,443×470×810	1,443×470×810	1,443×470×810	1,970×668×858.5	1,970×668×858.5	1,970×668×858.5
Packing dimension	W×H×D	mm	1,509×550×990	1,509×550×990	1,509×550×990	2,095×800×964	2,095×800×964	2,095×800×964
Net/Gross Weight		kg	115/129	115/129	115/129	232/245	232/245	232/245
Piping Connections	L(flare)	mm	Φ9.53×2	Φ9.53×2	Φ9.53×2	Φ12.7×2	Φ12.7×2	Φ15.9×2
	G(flare)	mm	Φ15.9×2	Φ15.9×2	Φ15.9×2	Φ22.2x2	Φ22.2x2	Φ28.6×2
	Drain piping	mm	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32
Standard Controller		-	Wired controller KJR-29B1/BK-E (6m wire is standard)					

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured at 1.4m below the air out-let.

* External static pressure is based on high speed indoor air flow.
* Specifications are subject to change without prior notice for product improvement.

Ceiling & Floor



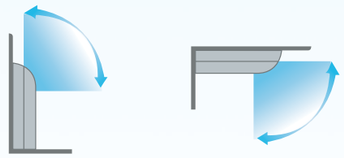
- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- Built-in Drain Pump
- LED Display

Panel with LED display

The front panel and display panel have different colors to choose: white and brown for big panel, blue and brown for small panel. Other colors are available if required.

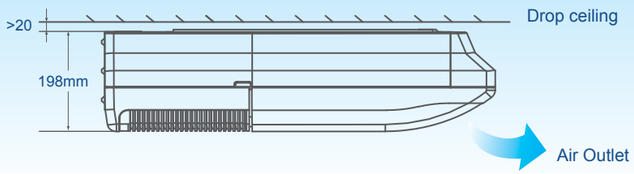
Convenient installation

- The unit even can be easily installed at the corner of a narrow ceilings.
- It is especially useful when central installation is impossible due to features such as lights.



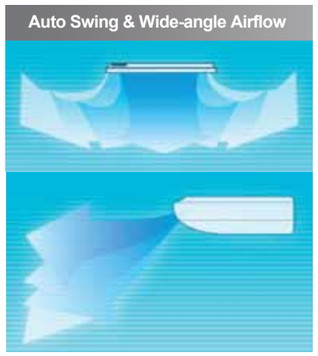
The unit can be installed either horizontally on the ceiling or vertically against the wall.

Quiet and comfortable environment



- The slim and sleek design starting at just 30kg enables quick, easy and neat installation.
- Low noise operations; minimum 36 dB(A)

Auto swing and wide angle air flow



1.Auto horizontal and auto vertical swing functions for more even and comfortable airflow.
2.Three air flow speeds: low, medium and high; double air guides.
3.Adopt electrical expansion valve, ensuring precise flow control, lower modulation noise when EXV operating.
4.Smoother airflow and less turbulence due to the multi-blade fan and the air guide design.

Model			MDV-D36DL/N1-C	MDV-D45DL/N1-C	MDV-D56DL/N1-C	MDV-D71DL/N1-C	MDV-D80DL/N1-C
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	3.6	4.5	5.6	7.1	8
		kcal/h	3,100	3,900	4,800	6,100	6,900
		Btu/h	12,300	15,400	19,100	24,200	27,300
Heating capacity		kW	4	5	6.3	8	9
		kcal/h	3,400	4300	5,400	6,800	7,700
		Btu/h	13,600	17,100	21,500	27,300	30,700
Power input	Cooling	W	49	120	122	125	130
	Heating		49	120	122	125	130
Rated current	Cooling	A	0.55	0.55	0.55	0.57	0.6
	Heating		0.55	0.55	0.55	0.57	0.6
Airflow rate(H/M/L)		m^3/h	650/570/500	800/600/500	800/600/500	800/600/500	1,200/900/700
		CFM	383/335/294	471/353/294	471/353/294	471/353/294	706/530/412
Sound pressure level(H/M/L)		dB(A)	40/38/36	43/41/38	43/41/38	43/41/38	45/43/40
Refrigerant		Type	R410A				
		Control method	EXV				
Net dimension(W×H×D)		mm	990×660×206	990×660×206	990×660×206	990×660×206	1,280×660×206
Packing dimension(W×H×D)		mm	1,089×744×296	1,089×744×296	1,089×744×296	1,089×744×296	1,379×744×296
Net weight		kg	26	28	28	28	34.5
Gross weight		kg	32	34	34	34	41
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ16	OD Φ16	OD Φ16	OD Φ16	ODΦ16
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)				

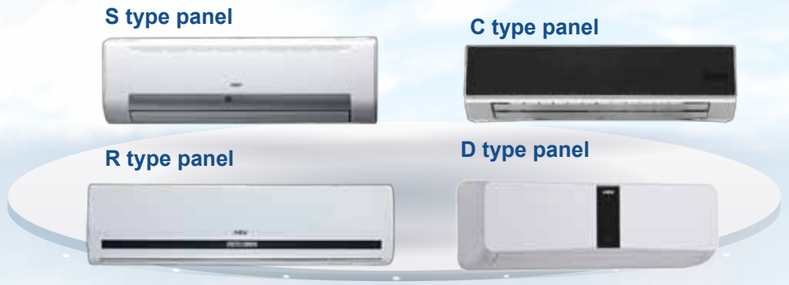
Model			MDV-D90DL/N1-C	MDV-D112DL/N1-C	MDV-D140DL/N1-C	MDV-D160DL/N1-C
Power supply			1-phase, 220-240V, 50Hz			
Cooling capacity		kW	9	11.2	14	16
		kcal/h	7,700	9,600	13,300	13,800
		Btu/h	30,700	38,200	47,800	54,600
Heating capacity		kW	10	12.5	15.5	18
		kcal/h	8,600	10,800	13,000	15,500
		Btu/h	34,100	42,700	52,900	61,400
Power input	Cooling	W	130	182	182	300
	Heating		130	182	182	300
Rated current	Cooling	A	0.6	0.83	0.83	1.41
	Heating		0.6	0.83	0.83	1.41
Airflow rate(H/M/L)		m^3/h	1,200/900/700	1,980/1,860/1,730	1,980/1,860/1,730	1,980/1,860/1,730
		CFM	706/530/412	1,165/1,095/1,018	1,165/1,095/1,018	1,165/1,095/1,018
Sound pressure level(H/M/L)		dB(A)	45/43/40	47/45/42	47/45/42	47/45/42
Refrigerant		Type	R410A			
		Control method	EXV			
Net dimension(W×H×D)		mm	1,280×660×206	1,670×680×244	1,670×680×244	1,670×680×285
Packing dimension(W×H×D)		mm	1,379×744×296	1,764×760×329	1,764×760×329	1,775x760x377
Net weight		kg	34.5	54	54	57.5
Gross weight		kg	41	59	59	63.5
Piping connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	ODΦ16	ODΦ16	ODΦ16	ODΦ16
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)			

Notes:

1. Nominal cooling capacities are based on the following conditions: return airtemperature.: 27°CDB, 19°CWB, and outdoor temperature.:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Floor standing :Sound level is measured 1m from air-outlet in horizontal distance, 1m above the floor in vertical distance.
   Ceiling mounted:Sound level is measured 1m from air-outlet in horizontal distance,1m from air-outlet in vertical distance.

* Specifications are subject to change without prior notice for product improvement.

Wall mounted



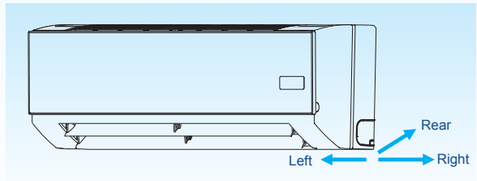
- Auto Restart
- Auto Addressing
- Cleanable Panel
- Anti-Cold Air Function
- Follow Me
- LED Display

Panel with LED display

The front panel and display panel have different colors to choose: white and brown for big panel, blue and brown for small panel.

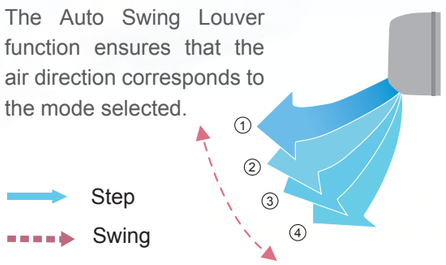
Convenient installation

- Multi-refrigerant outlet pipe method: left\right\rear, more flexible for installation.
- For S panel,R panel & C panel , the EXV is built-in the indoor unit , compact size , longer the connection pipe;gas pipe:468mm;liquid pipe:550mm,more flexible for installation. For D panel, the EXV can be 5m far away from the indoor unit, which lower the noise.
- Adopts new type fixing plate, is easy to install and stable.



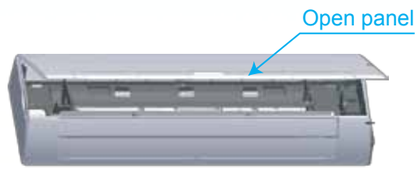
Auto swing louver

The Auto Swing Louver function ensures that the air direction corresponds to the mode selected.



Easy maintenance

The front panel can be removed for easy maintenance access.



Optimal comfort through better flow control and quiet operations

The mechanical expansion valve offers 2,000-stage element positions to ensure precise flow control and less modulation noise when the EXV is operating for a quiet and comfortable environment. Three air flow speeds: low, medium and high; double air guides. Smoother airflow and less turbulence is ensured by the multi-blade fan and the air guide design.

S type panel

Model			MDV-D15G/N1-S	MDV-D22G/N1-S	MDV-D28G/N1-S	MDV-D36G/N1-S	MDV-D45G/N1-S	MDV-D56G/N1-S
Power supply			1-phase,220-240V,50Hz					
Cooling capacity		kW	1.5	2.2	2.8	3.6	4.5	5.6
		kcal/h	1290	1900	2400	3100	3900	4800
		Btu/h	5100	7500	9600	12300	15400	19100
Heating capacity		kW	1.7	2.4	3.2	4	5	6.3
		kcal/h	1470	2100	2800	3400	4300	5400
		Btu/h	5800	8200	10900	13600	17100	21500
Rated input	Cooling	W	28	28	28	28	45	45
	Heating		28	28	28	28	45	45
Rated current	Cooling	A	0.12	0.14	0.14	0.14	0.2	0.2
	Heating		0.12	0.14	0.14	0.14	0.2	0.2
Airflow rate (H/M/L)		m^3/h	427/389/336	525/480/430	525/480/430	590/520/480	860/755/630	925/860/755
		CFM	251/229/198	309/283/253	309/283/253	347/306/283	506/444/371	544/506/444
Sound pressure level(H/M/L)		dB(A)	33/31/28	35/32/29	35/32/29	35/32/29	40/38/34	40/38/34
Refrigerant		Type	R410A					
		Control method	EXV					
Indoor Unit	Net dim.(W×H×D)	mm	915×290×230	915×290×230	915×290×230	915×290×230	1072×315×230	1072×315×230
	Gross dim.(W×H×D)		1020×390×315	1020×390×315	1020×390×315	1020×390×315	1180×415×315	1180×415×315
	NetGross	kg	12.4/15.9	13/16.8	13/16.8	13/16.8	15.1/19.5	15.1/19.5
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5
Standard Controller			Wireless remote controller (RM05/BG(T)E-A)					

Model			MDV-D22G/DN1-S	MDV-D28G/DN1-S	MDV-D36G/DN1-S	MDV-D45G/DN1-S	MDV-D56G/DN1-S
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6
		kcal/h	1,900	2,400	3,100	3,900	4,800
		Btu/h	7,500	9,600	12,300	15,400	19,100
Heating capacity		kW	2.4+0.75	3.2+0.75	4+0.75	5+0.9	6.3+0.9
		kcal/h	2,100+600	2,800+600	3,400+600	4,300+800	5,400+800
		Btu/h	8,200+2,600	10,900+2,600	13,600+2,600	17,100+3,100	21,500+3,100
Power input	Cooling	W	28	28	28	45	45
	Heating		28	28	28	45	45
Rated current	Cooling	A	0.14	0.14	0.14	0.2	0.2
	Heating		0.14+3.38	0.14+3.38	0.14+3.38	0.20+4.05	0.20+4.05
Airflow rate(H/M/L)		m^3/h	525/480/430	525/480/430	590/520/480	860/755/630	925/860/755
		CFM	309/283/253	309/283/253	347/306/283	506/444/371	544/506/444
Sound pressure level(H/M/L)		dB(A)	35/32/29	35/32/29	35/32/29	40/38/34	40/38/34
Refrigerant		Type	R410A				
		Control method	EXV				
Net dimension(W×H×D)		mm	915×290×230	915×290×230	915 ×290×230	1,072×315×230	1,072×315×230
Packing dimension(W×H×D)		mm	1,020×390×315	1,020×390×315	1,020×390×315	1,180×415×315	1,180×415×315
Net weight		kg	13.3	13.3	13.3	15.1	15.5
Gross weight		kg	17.5	17.5	17.5	19.9	19.9
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)				

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature:35°CDB, equivalent ref. piping: 8m (horizontal) 2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured 1m below the air outlet horizontally and vertically.

* Specifications are subject to change without prior notice for product improvement.

C type panel

Model			MDV-D22G/N1YB	MDV-D28G/N1YB	MDV-D36G/N1YB	MDV-D45G/N1YB	MDV-D56G/N1YB
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6
		kcal/h	1,900	2,400	3,100	3,900	4,800
		Btu/h	7,500	9,600	12,300	15,400	19,100
Heating capacity		kW	2.4	3.2	4	5	6.3
		kcal/h	2,100	2,800	3,400	4,300	5,400
		Btu/h	8,200	10,900	13,600	17,000	21,500
Power input	Cooling	W	28	28	28	45	45
	Heating		28	28	28	45	45
Rated current	Cooling	A	0.14	0.14	0.14	0.2	0.2
	Heating		0.14	0.14	0.14	0.2	0.2
Airflow rate(H/M/L)		m^3/h	520/480/430	520/480/430	520/480/430	860/755/630	925/860/755
		CFM	306/283/253	306/283/253	306/283/253	506/444/371	544/506/444
Sound pressure level(H/M/L)		dB(A)	35/32/29	35/32/29	35/32/29	40/38/34	40/38/34
Refrigerant		Type	R410A				
		Control method	EXV				
Net dimension(W×H×D)		mm	915×290×210	915×290×210	915×290×210	1,070×315×210	1,070×315×210
Packing dimension(W×H×D)		mm	1,020×385×300	1,020×385×300	1,020×385×300	1,165×395×285	1,165×395×285
Net weight		kg	12	12	12	15	15
Gross weight		kg	17.5	17.5	17.5	19	19
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)				

R type panel

Model			MDV-D71G-R3/N1Y	MDV-D80G-R3/N1Y	MDV-D90G-R3/N1Y
Power supply			1-phase, 220-240V, 50Hz		
Cooling capacity		kW	7.1	8	9
		kcal/h	6,100	6,900	7,700
		Btu/h	24,200	27,300	30,700
Heating capacity		kW	8	9	10
		kcal/h	6,900	7,700	8,600
		Btu/h	27,300	30,700	34,100
Power input	Cooling	W	79	86	86
	Heating		79	86	86
Rated current	Cooling	A	0.33	0.39	0.39
	Heating		0.33	0.39	0.39
Airflow rate(H/M/L)		m^3/h	1,190/880/680	1,320/840/640	1,320/840/640
		CFM	700/518/400	776/494/376	776/494/376
Sound pressure level(H/M/L)		dB(A)	47/43/42	48/43/38	49/43/38
Refrigerant		Type	R410A		
		Control method	EXV		
Net dimension(W×H×D)		mm	1,250×325×245	1,250×325×245	1,250×325×245
Packing dimension(W×H×D)		mm	1,345×335×430	1,345×335×430	1,345×335×430
Net weight		kg	19.9	19.9	19.9
Gross weight		kg	25	25	25
Piping connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ16.5	OD Φ16.5	OD Φ16.5
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)		

Indoor Units Lineup

D type panel

Model			MDV-D22G /N1Y-11D5	MDV-D28G /N1Y-11D5	MDV-D36G /N1Y-11D5	MDV-D45G /N1Y-11D5	MDV-D56G /N1Y-11D5	MDV-D71G /N1Y-11D5
Power supply			1-phase,220-240V,50Hz					
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1
		kcal/h	1900	2400	3100	3900	4800	6100
		Btu/h	7500	9600	12300	15400	19100	24200
Heating capacity		kW	2.4	3.2	4	5	6.3	8
		kcal/h	2100	2800	3400	4300	5400	6900
		Btu/h	8200	10900	13600	17100	21500	27300
Rated input	Cooling	W	25	29.9	38.7	42.1	61.7	79
	Heating		25	29.9	38.7	42.1	0.3	0.35
Rated current	Cooling	A	0.13	0.15	0.18	0.21	61.7	79
	Heating		0.13	0.15	0.18	0.21	0.3	0.35
Airflow rate (H/M/L)		m^3/h	367/295/263	491/403/341	576/419/360	724/511/436	1056/883/741	1182/842/702
		CFM	216/174/155	289/237/201	339/247/212	426/301/257	622/520/436	696/496/413
Sound pressure level(H/M/L)		dB(A)	33/31/28	33/31/28	33/31/28	38/36/32	38/36/32	43/41/38
Refrigerant		Type	R410A					
		Control method	EXV					
Indoor Unit	Net dim.(W×H×D)	mm	680×255×180	770×255×190	770×255×190	905×275×205	1030×315×220	1030×315×220
	Gross dim.(W×H×D)		885×310×395	975×310×395	975×310×395	1110×310×395	1240×310×415	1240×310×415
	NetGross	kg	6.5/11.4	7.4/12.3	7.4/12.3	9.1/14.2	12.9/18.2	12.9/18.2
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Drain piping	mm	ODΦ16	ODΦ16	ODΦ16	ODΦ16	ODΦ16	ODΦ16
Standard Controller			Wireless remote controller (RM05/BG(T)E-A)					

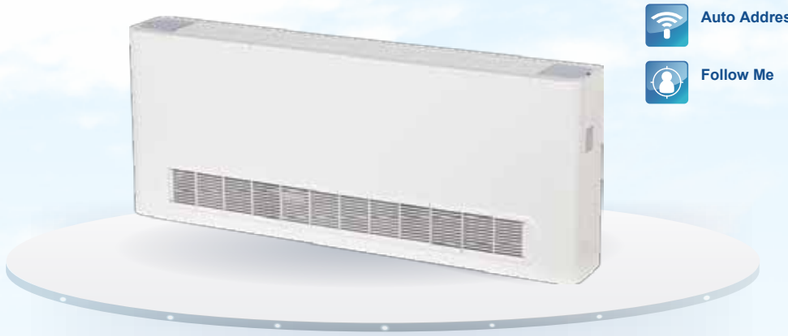
Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature:35°CDB, equivalent ref. piping: 8m (horizontal) 2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured 1m below the air outlet horizontally and vertically.
* Specifications are subject to change without prior notice for product improvement.

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature:35°CDB, equivalent ref. piping: 8m (horizontal) 2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured 1m below the air outlet horizontally and vertically.
* Specifications are subject to change without prior notice for product improvement.

Floor Standing



- Auto Restart
- Cleanable Panel
- Auto Addressing
- Anti-Cold Air Function
- Follow Me
- LED Display

Easy installation

Floor standing types can be hung on the wall or installed on the floor. The floor type of unit can make cleaning and maintenance much easier. Running the piping from the rear allows the unit to be hung on walls. Cleaning under the unit, where dust tends to accumulate, is considerably easier.

Easy maintenance

Filter is provided as a standard accessory. It can be removed and cleaned easily thanks to MDV's sophisticated design and the product's removable blades.

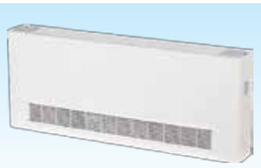
The streamlined appearance harmonizes the unit with a given room's interior decor. All metal parts are made of commercial grade galvanized steel for maximum protection against corrosion.

Saves installation space

Concealed floor standing type

F3B series concealed type

The body is concealed in the skirting board to improve aesthetics. The body is just 212mm deep, and can be installed at the room's perimeter. Special installation methods eliminate noise in the room area.



Air intake from front(F4 series)

Air intake from below(F5 series)

Model			MDV-D22Z/N1-F3B MDV-D22Z/N1-F4 MDV-D22Z/N1-F5	MDV-D28Z/N1-F3B MDV-D28Z/N1-F4 MDV-D28Z/N1-F5	MDV-D36Z/N1-F3B MDV-D36Z/N1-F4 MDV-D36Z/N1-F5	MDV-D45Z/N1-F3B MDV-D45Z/N1-F4 MDV-D45Z/N1-F5	MDV-D56Z/N1-F3B MDV-D56Z/N1-F4 MDV-D56Z/N1-F5	MDV-D71Z/N1-F3B MDV-D71Z/N1-F4 MDV-D71Z/N1-F5	MDV-D80Z/N1-F3B MDV-D80Z/N1-F4 MDV-D80Z/N1-F5
Power supply			1-phase, 220-240V, 50Hz						
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	8
		kcal/h	1,900	2,400	3,100	3,900	4,800	6,100	6,900
		Btu/h	7,500	9,500	12,300	15,400	19,100	242,00	27,300
Heating capacity		kW	2.4	3.2	4	5	6.3	8	9
		kcal/h	2,100	2,800	3,400	4,300	5,400	6,900	7,700
		Btu/h	8,200	10,900	13,600	17,100	21,500	27,300	30,700
Power input	Cooling	W	40	46	46	49	88	130	130
	Heating		40	46	46	49	88	130	130
Rated current	Cooling	A	0.19	0.2	0.19	0.22	0.38	0.57	0.57
	Heating		0.19	0.2	0.15	0.22	0.38	0.57	0.57
Airflow rate(H/M/L)		m^3/h	530/456/400	569/485/421	624/522/375	660/542/440	1,150/970/830	1,380/1,100/870	1,380/1,100/870
		CFM	312/268/235	335/285/248	367/307/221	388/319/259	677/571/489	812/647/512	812/647/512
Sound pressure level(H/M/L)	F3B	dB（A）	36/33/29	36/33/29	37/34/30	37/34/30	41/35/31	44/39/33	44/39/33
	F4		36/33/29	36/33/29	37/34/30	37/34/30	41/35/31	44/39/33	44/39/33
	F5		36/33/29	36/33/29	37/34/30	37/34/30	41/35/31	44/39/33	44/39/33
Refrigerant	Type		R410A						
	Control method		EXV						
Net dimension (W×H×D)	F3B	mm	840×544×212	840×544×212	1,036×544×212	1,036×544×212	1,336×544×212	1,336×544×212	1,336×544×212
	F4		1,000×625×220	1,000×625×220	1,200×625×220	1,200×625×220	1,500×625×220	1,500×625×220	1,500×625×220
	F5		1,000×625×220	1,000×625×220	1,200×625×220	1,200×625×220	1,500×625×220	1,500×625×220	1,500×625×220
Packing dimension (W×H×D)	F3B	mm	939×639×305	939×639×305	1,139×639×305	1,139×639×305	1,439×639×305	1,439×639×305	1,439×639×305
	F4		1,089×683×312	1,089×683×312	1,289×683×312	1,289×683×312	1,589×683×312	1,589×683×312	1,589×683×312
	F5		1,182×683×312	1,182×683×312	1,382×683×312	1,382×683×312	1,682×683×312	1,682×683×312	1,682×683×312
Net/Gross weight	F3B	kg	26/29.5	26/29.5	29.5/34	29.5/34	36/40	36/40	36/40
	F4		30/35	30/35	37/43	37/43	44/50	44/50	44/50
	F5		30/38	30/38	37/46	37/46	44/53	44/53	44/53
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	ODΦ16	ODΦ16	ODΦ16	ODΦ16	ODΦ16	ODΦ16	ODΦ16
Standard Controller			Wireless remote controller(RM05/BG(T)E-A)						

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured 1m from the air out-let in horizontal distance and 1m above the floor in vertical distance.

* Specifications are subject to change without prior notice for product improvement.

Console

- Auto Restart
- Cleanable Panel
- Auto Addressing
- Anti-Cold Air Function
- Follow Me
- LED Display

Compact size and stylish

- The elegant and thin unit body complements the existing decor and saves space.
- The EXV is installed inside of the indoor unit for added compactness.

Flexible installation

- Can be installed on the floor or lower wall
- As a floor standing type, it can be semi or fully accessed without losing capacity.

High Comfort

- Flexible air blow: vertical auto swing and wide angle louvers ensure that warm air reaches every corner of the room and increases the air flow coverage.
- Indoor unit adopts DC motor with five fan speeds to meet different requirements.
- Applies the Fujikoki mechanical expansion valve which offers 2,000-stage element positions to ensure precise flow control and lower modulation noise when the EXV is operating.

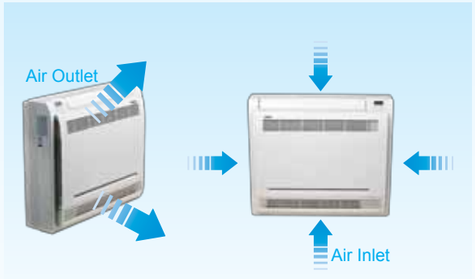
Powerful mode can be selected for rapid cooling or heating

High efficiency filter

- Built in formaldehyde nemesis filter
- Active-carbon and biological anti-virus filter are optional.

Two air outlets and four air inlets

Four directions of air inlet;
two options of air outlet: Up and Down; or Up only.



Bottom, top, and right/left side, for better ventilation.

Low-noise design

Five-speed indoor unit; low noise; low power consumption.

Low noise operation, lowest to 26dB(A)

Model			MDV-D22Z/DN1-B	MDV-D28Z/DN1-B	MDV-D36Z/DN1-B	MDV-D45Z/DN1-B
Power supply			1-phase, 220-240V, 50Hz			
Cooling capacity		kW	2.2	2.8	3.6	4.5
		kcal/h	1,900	2,400	3,100	3,900
		Btu/h	7,500	9,600	12,300	15,400
Heating capacity		kW	2.6	3.2	4.0	5.0
		kcal/h	2,200	2,800	3,400	4,300
		Btu/h	8,900	10,900	13,600	17,100
Power input	Cooling	W	20	25	25	45
	Heating		20	25	25	45
Rated current	Cooling	A	0.09	0.11	0.11	0.2
	Heating		0.09	0.11	0.11	0.2
Airflow rate(H/M/L)		m^3/h	430/345/229	510/430/229	510/430/229	660/512/400
		CFM	253/203/135	300/253/135	300/253/135	388/300/235
Sound pressure level(H/M/L)		dB(A)	38/32/26	39/33/27	39/33/27	42/39/36
Refrigerant		Type	R410A			
		Control method	EXV			
Net dimension(W×H×D)		mm	700×600×210	700×600×210	700×600×210	700×600×210
Packing dimension(W×H×D)		mm	810×710×305	810×710×305	810×710×305	810×710×305
Net weight		kg	14	15	15	15
Gross weight		kg	19	20	20	20
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7
	Drain piping	-	OD Φ16	OD Φ16	OD Φ16	OD Φ16
Standard Controller			Wireless remote controller(RM05/BG(T)E-A)			

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured 1m from the air out-let in horizontal distance and 1m above the floor in vertical distance.

⋆ Specifications are subject to change without prior notice for product improvement.

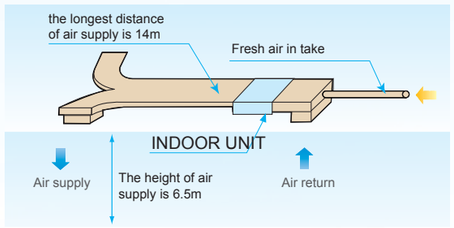
Indoor Units Lineup

Fresh Air Processing Unit

Healthy and comfortable

Fresh air is imported, provides a healthy and comfortable living environment.

100% Fresh air processing unit



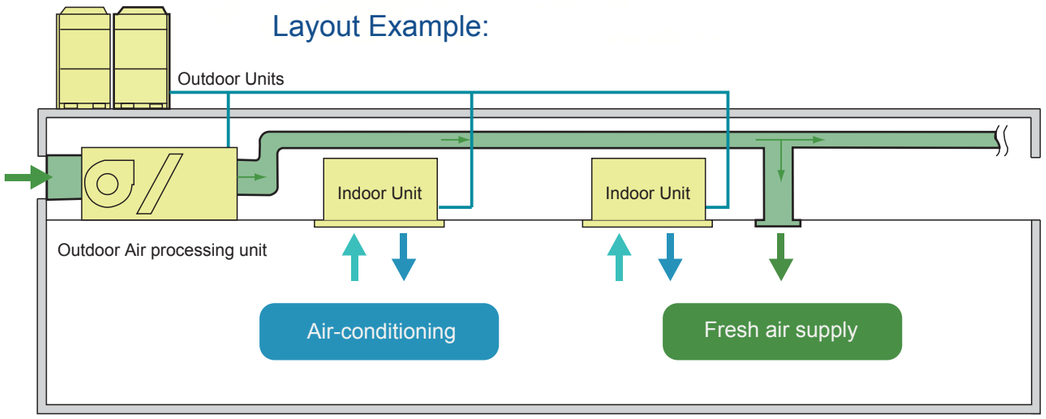
Both fresh air filtration and heating/cooling can be achieved in a single system.

Indoor units and fresh air processing unit can be connected to the same refrigerant system, increasing design flexibility and greatly reducing total system costs.

High external static pressure

External static pressure can be up to 220Pa(models 125 to 140) and 260Pa(models 200 to 280) for more flexible duct applications. The maximum distance of air supply is about 14m and the maximum height of air supply is about 6.5m.

Innovative air supply technology for excellent room temperature control



Model			MDV-D125T1/N1-FA	MDV-D140T1/N1-FA	MDV-D200T1/N1-FA	MDV-D250T1/N1-FA	MDV-D280T1/N1-FA
Power Supply			1-phase, 220-240V, 50Hz				
Capacity	Cooling	kW	12.5	14	20	25	28
		kcal/h	10,800	12,000	17,200	21,500	24,100
		Btu/h	42,700	47,800	68,200	85,300	95,500
	Heating	kW	10.5	12	18	20	22
		kcal/h	9,000	10,300	15,550	17,200	18,900
		Btu/h	35,800	41,000	61,400	68,200	75,100
Power (Cooling)	Input	W	430	430	1063	1,063	1063
	Rated Current	A	2.4	2.4	5.3	5.6	5.6
Power (Heating)	Input	W	461	430	1063	1,063	1,063
	Rated Current	A	2.3	2.4	5.3	5.6	5.6
Air flow (H/M/L)		m^3/h	1,700/1,350/1,050	1,700/1,350/1,050	3,150/2,650/2,300	3,300/2,850/2,500	3,300/2,850/2,500
		CFM	1,000/795/618	1,000/795/618	1,854/1,560/1,354	1,942/1,677/1,471	1,942/1,677/1,471
ESP (external static pressure)		Pa	50(30~220)	50(30~220)	140(50~260)	140(50~260)	140(50~260)
Sound pressure level(H/M/L)		dB(A)	54/52/50	54/52/50	54/53/51	55/54/52	55/54/52
Refrigerant	Type		R410A				
	Control method		EXV				
Net dimension	W×H×D	mm	1,368×420×691	1,368×420×691	1,443×470×810	1,443×470×810	1,443×470×810
Packing dimension	W×H×D	mm	1,436×440×768	1,436×440×768	1,509×522×964	1,509×522×964	1,509×522×964
Net/Gross Weight		kg	69.5/76	69.5/76	115/125	115/125	115/125
Piping Connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ25	OD Φ25	OD Φ32	OD Φ32	OD Φ32
Standard Controller		-	Wired controller KJR-29B1/BK-E (6m wire is standard)				

Notes:

1 . Nominal cooling capacities are based on the following conditions: outdoor air temperature: 33ºC DB, 24ºC WB, equivalent ref. piping: 8m (horizontal)

2 . Nominal heating capacities are based on the following conditions: outdoor air temperature: 0°CDB, -1°CWB, equivalent ref. Piping: 8m (horizontal)

3. Sound level is measured 1.4m from the air out-let.

* external static pressure are based on high speed indoor air flow.

* Specifications are subject to change without prior notice for product improvement.

Connection Conditions:

The following restrictions must be observed in order to maintain the indoor units connected to the same system.

* When outdoor-air processing units are connected, the total connection capacity must be within 50% to 100% of that of the outdoor units.

* When outdoor-air processing units and standard indoor units are connected, the total connection capacity of the outdoor-air processing units must not exceed 30% of that of the outdoor units.

* Outdoor-air processing units can be used without indoor units.

Control Systems

Network Control

Data converter
CCM15

iPad

Laptop

Connectable to various sized Gateway

IMM Software

M-INTERFACE Gateway

Lonworks BMS

MD-LonGW64

BACnet BMS

MD-CCM08

Web monitoring system

Modbus BMS

Modbus gateway

Centralized Control

Indoor Centralized Controller (Touch key)

X,Y,E

CCM30

Indoor Centralized Controller

X,Y,E

MD-CCM03

Outdoor Centralized Monitor

F1,F2,E

K1,K2,E

MD-CCM02

Note: The wires in the diagram show the signal flows only, while not represent the actual connecting ways.

Individual control

Wired controller

KJR-10B KJR-86C
KJR-12B KJR-120A
KJR-90A KJR-90C
KJR-29B

Remote controller

RM02
RM05
R05
R06
R51
R71

Accessories

Card-key Interface MD-NIM05

MD-NIM05

Card-key

Wired controller

Infrared Sensor MD-NIM09

Infrared control box

Infrared sensor module

Wired controller

Outdoor units

Comparison of Controllers

Item		Remote controller			Wired Controller				Centralized Controller		
Model name		RM05/ RM02	R51/ R71	R05/ R06	KJR-10B /KJR-12B	KJR-120A	KJR-90A /KJR-86C	KJR-29B KJR-90C	CCM30/MD-CCM03	MD-CCM09	KJR-90B
	MAX. controllable IDU		/		1	1	1	1	64	64	16
A/C control function	On/Off	●	●	●	●	●	●	●	●	●	●
	Operation mode setting	●	●	●	●	●	●	●	●	●	●
	Fan speed setting	●	●	●	●	●	●	●	●	●	-
	Room temp. setting	●	●	●	●	●	●	●	●	●	-
	Vertical swing	●	●/-	●/-	-	-	-	-	-	-	-
	Horizontal swing	●	●	●	●	●	●/-	●	●	●	-
	Air direction	●/-	-/●	●	-	-	-	-	-	-	-
	Economic mode	●	●	●/-	●	●	-	-	-	-	-
	Central setting	-	-	-	-	-	-	-	●	●	●
	Keyboard lock	●	●/-	●	●	●	-	●	●	●	-
	Mode lock	-	-	-	-	-	-	-	●	●	-
	Remote signal receiving	-	-	-	-	-	-	●	-	-	-
	26℃ shortcut setting	-/●	-	-	-	-	-/●	-	-	-	-
	Silent mode	-	-	-	-	-	-	●	-	-	-
Display	Backlight	●	●/-	●	●/-	●	-/●	●	●	●	●
	Current time	●/-	-	●	●/-	●	●/-	-	-	●	-
	RC prohibition	-	-	-	-	-	-	-	●	●	-
	Address	-	-	-	-	-	-	-	●	●	-
	Error code	-	-	-	-	●	-	-	●	●	-
	Room temp.	-	-	-	-	-	-/●	-	-	-	-
Timer	Period	-	-	-	-	-	-	-	-	Week	-
	On/Off per day	-	-	-	-	-	-	-	-	4	-
	On/Off per week	-	-	-	-	-	-	-	-	28	-
	On/Off timer	●	●	●	●	●	●/-	●	●	●	-
Control	FOLLOW ME	-/●	-	-	-/●	-	-	●	-	-	-
	Emergent stop	-	-	-	-	-	-	-	●	-	-
	Emergent start	-	-	-	-	-	-	-	●	-	-
	Address setting	●	-	-	-	-	-	●	-	-	-
	BMS access	-	-	-	-	-	-	-	●	-	-
	Control via internet	-	-	-	-	-	-	-	●	-	-
	Air filter cleaning reminding	-	-	-	●/-	●	-	●	●/-	-	-

●: Available controller functions

—: Not available controller functions

Wireless Remote Controller

RM02

RM05

R05

R06

R51

R71

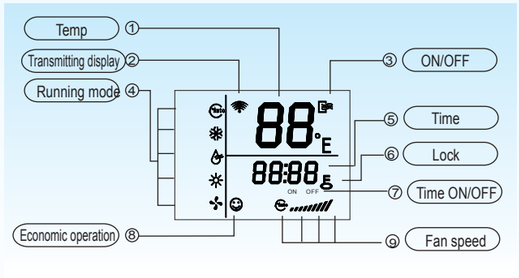
Functions

Portable device

The wireless remote controller is a portable control device that enables users to control the A/C anywhere within a distance of 11m.

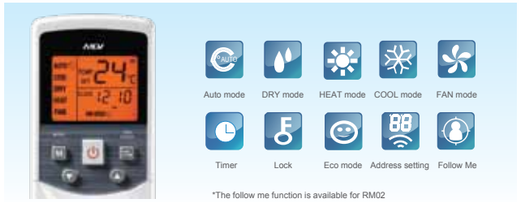
Simplified user interface

Users can synchronize the air conditioners' parameters with the display panel on the wireless remote controller to precisely control a room's environment.



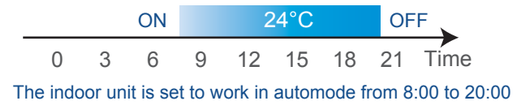
Background light

The background light allows users to operate the device in a dark room. The device lights up when a button is pressed, and turns off when a given operation is completed.



Built-in timer

The built-in daily timer offers the convenience of automatically starting and stopping the system at set times.



The indoor unit is set to work in automode from 8:00 to 20:00

Setting addresses

Besides the machine's auto addressing function, users can set the indoor unit's address on the wireless remote controller RM05/RM02.

Model	RM02	RM05	R05	R06	R51	R71
Dimensions (H×W×D)(mm)	150×60×15	150×65×20	150×65×20	100×55×20	140×60×15	125×42×27
Power (V)	1.5V(LR03/AAA)×2					

Wired Controller

KJR-29B

KJR-90C

Functions

Air filter cleaning reminding

The wired controller records the total running time of the indoor unit. When the accumulated running time reaches the pre-set value, it will remind users need to clean the air filter of the indoor unit.

Clean the filter regularly can keep indoor air fresh and clean, good for your health.

*Available for KJR-10B/KJR-29B/KJR-90C model.

Silent mode

Under the cooling, heating and auto mode,when operate the silent mode, it can reduce the running noise through setting the fan speed to low. This will help you bring a quieter environment.

KJR-29B
(Touch key)

Remote signal receiving function

KJR-29B and KJR-90C provide a signal receiver for remote controller. Signal from remote controller can be received by a wired controller, then sent to the indoor unit and it conveniences to control.

Locking wired controller

The locking function can be used to prevent other people from using the controller.

Specifications

Model	29B	90C
Dimensions (H×W×D)(mm)	120×120×20	86×86×16.5
Power (V)	DC 5V	

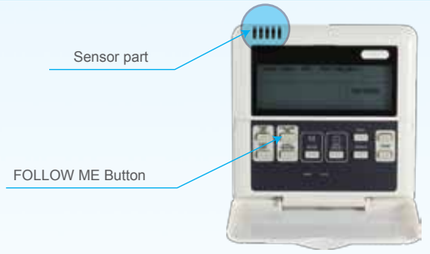
Wired Controller

KJR-10B

KJR-12B

Functions

Follow me

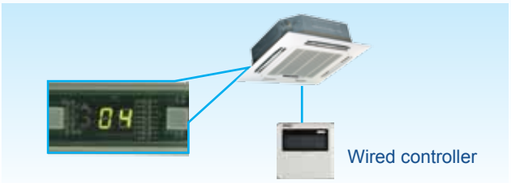


With the FOLLOW ME function, the wired controller can detect the air temperature at the user’ s altitude instead that of the ceiling or floor. This helps making the room environment comfortable and the temperature accurate.

*The follow me function is available for KJR-12B/KJR-29B model.

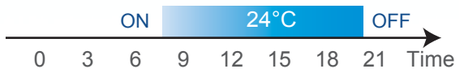
Setting addresses

With the address setting function,and easy for the installation and future service. The service person can set the address for indoor unit by KJR-10B, KJR-29B and KJR-90C.



Built-in timer

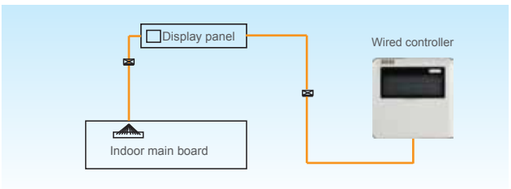
Built-in daily timer offers the convenience of automatically starting and stopping the system at set times.



The indoor unit is set to work in automode from 8:00 to 20:00

Easy connection

The wired controller conveniently connects to the indoor unit’ s display panel via connecting wire.



Specifications

Model	10B	12B
Dimensions (H×W×D)(mm)	120×120×15	120×120×15
Power (V)	DC 5V	

Centralized Controller

Indoor Centralized Controller

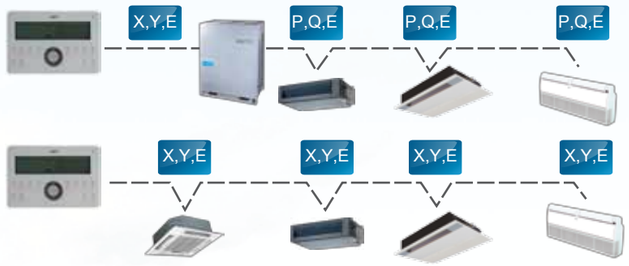
MD-CCM03

CCM30

Functions

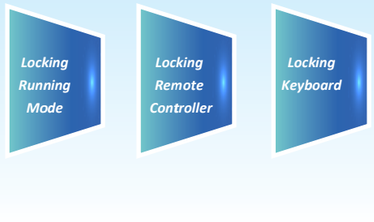
Centralized control

The centralized controller is a multifunctional device that can control up to 64 indoor units within a maximum connection length of 1,200m.
The device connects to the master outdoor units of MDV's newly designed products to simplify and centralize the wiring configuration. The two connection modes are as follows:



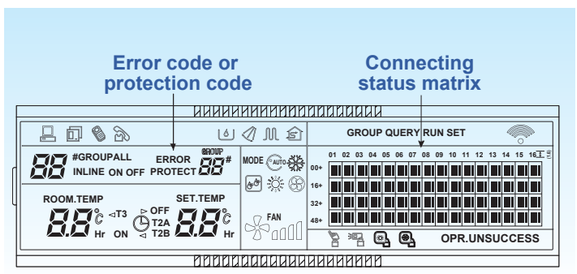
Three lock modes

Centralized controller provides a superior way to manage the indoor units. Users are able to make their own choice from locking the wireless controller, locking the running mode or lock the centralized controller's keyboard as they wish.



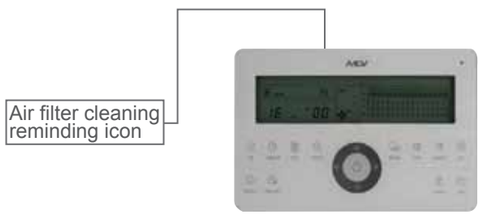
Indoor unit working status display

The centralized controller displays indoor units' working status and error codes so users can easily identify faults via checking the error codes table in the user's manual before contacting a service engineer.



Air filter cleaning reminding function

The air filter cleaning reminder function is only available on the touch-key central controller CCM30. The "FL" icon indicates that the air filter in a given indoor unit needs cleaning.



CCM30

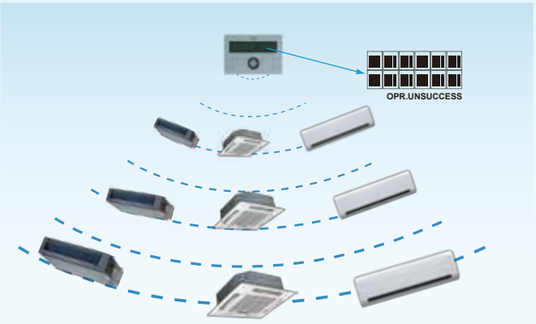
Functions

Stylish design

CCM's stylish design suits high-end environments. The keyboard lock function is used to prevent operational mistakes.

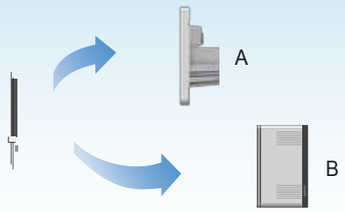
Single/unified control

The control object can be either a single unit or all units, which vastly simplifies the control process. Operation signal feedback ensures that all units are working in the correct mode.

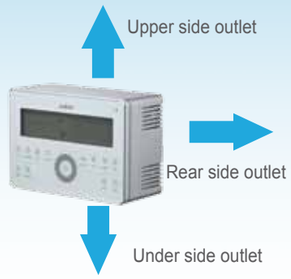


Easy installation

Centralized controller offers two different appearances to mostly suit the installation. The A structure must be embedded into the wall and the B structure doesn’ t need. Both of them are easy to operate.



*The A,B structure is available for CCM30, and MD-CCM03 only has B structure



B structure leading-out mode sketch

Access to network monitoring

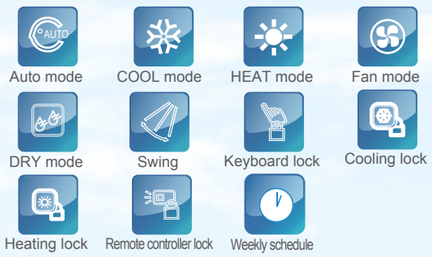
The centralized controller is able to bridge up to 64 indoor units on the network monitoring and building management systems.

Specifications

Model	MD-CCM03	CCM30
Dimensions (H*W*D)(mm)	179×119×74	180×122×78 and 180×122×68
Power (V)	198-242V(50/60Hz)	

Weekly Schedule Centralized Controller

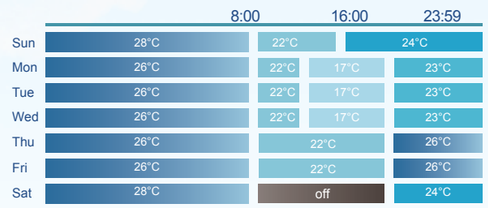
MD-CCM09



Functions

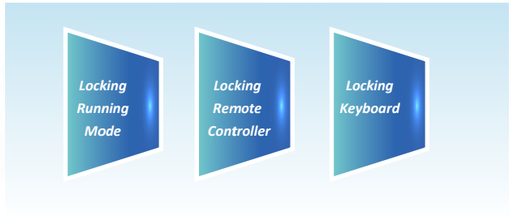
Weekly schedule

MD-CCM09 can include up to 64 indoor units in the weekly schedule. Users can set up to 4 periods per day, and select the desired running mode and room temperature. The operating object can be a single indoor unit or all the indoor units.



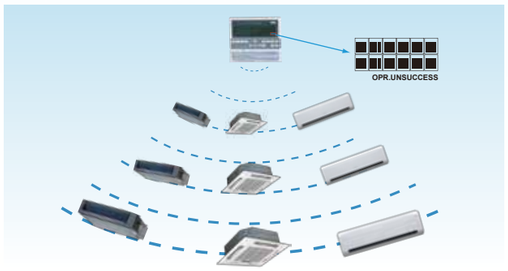
Three lock modes

Centralized controller MD-CCM09 provides a superior way to manage the indoor units. Users are able to make their own choice from locking the wireless controller, locking the running mode or lock the MD-CCM09’ s keyboard as they wish.



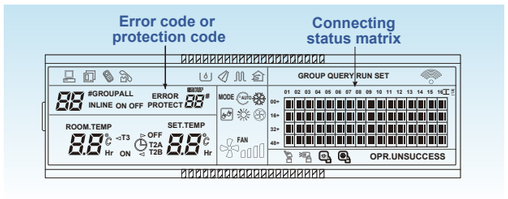
Single/unified control mode

The control object can be either a single unit or all units, which vastly simplifies the control process. Operation signal feedback ensures that all units are working in the correct mode.



Indoor unit working status display

MD-CCM09 displays indoor units' working status and error codes so users can easily identify faults via checking the error codes table in the user's manual before contacting a service engineer.



Specifications

Model	MD-CCM09
Dimensions (H*W*D)(mm)	179×119×74
Power (V)	198-242V(50/60Hz)

Unified On/Off Controller

KJR-90B

Unified controller design with graceful appearance and explicit panel.

Functions

Unified control

KJR-90B offers on/off and heating/cooling functionality for indoor units based on preset temperatures to ensure easy management.

Centralized control

KJR-90B can be used to centrally control up to 16 indoor units.

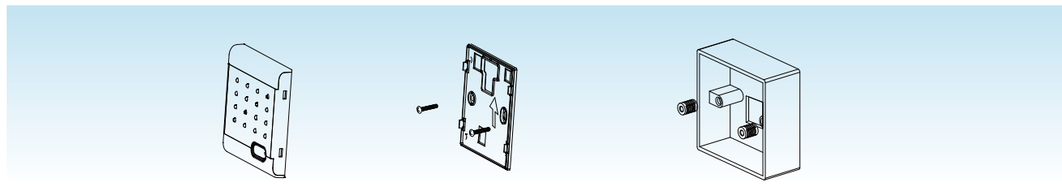
Light indicator

The LEDs on KJR-90B indicate the indoor units' running status for easy fault detection. The lights switch off automatically to save energy once a given operation is complete. The indicators are as follows:

Light	Blue	Red	Flash
Single On/Off key	Cooling/Fan	Heating	IDU Error
Unified On/Off key			EEPROM Error

Easy installation

KJR-90B can be easily mounted on the built-in cabinet:



Specifications

Model	KJR-90B
Dimensions (H*W*D)(mm)	90×86×8
Power (V)	DC 5V

Control System

Wired Controller

KJR-90A

KJR-86C

KJR-120A

Functions

Features

- Small and easy to install
- Suitable for all types of indoor units
- Can be stored in a mounting cabinet

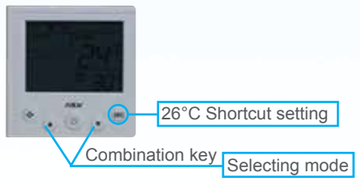
KJR-90A

Built-in timer

Built-in daily timer offers the convenience of automatically starting and stopping the system at set times.

Mode setting

Mode-button hidden controller： Press the temperature buttons "▲" and "▼" simultaneously for 3 seconds to select the operation mode: COOL and HEAT. The design is suitable for hotels, hospitals, schools and other similar types of buildings.



KJR-86C

Auto mode

For V4 plus R series used only. Under the auto mode of V4 plus R system, it can automatically switch to COOL or HEAT mode according to the temperature difference value between Tf(indoor temperature) and Ts(setting temperature)

KJR-120A

Specifications

Model	90A	86C	120A
Dimensions (H×W×D)(mm)	90×86×13	86×86×18	120×120×20
Power (V)	DC 5V		

HRV Wired Controller

KJR-27B

Functions

HRV controller

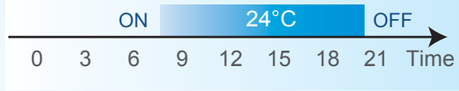
KJR-27B is individually designed for HRV—Heat Recovery Ventilator. The HRV can work in the following modes: exhaust, air supply, bypass, heat exchange, and auto.

AUTO->HEAT EXCHANGE->
EXHAUST->BYPASS->AIR SUPPLY

Built-in timer

Built-in daily timer offers the convenience of automatically starting and stopping the HRV at the set times.

Setup screen example
Set to wednesday: 8:00 to 20:00



Specifications

Model	KJR-27B
Dimensions(H×W×D)(mm)	120×120×15
Power (V)	198-242V(50/60Hz)

Weekly Schedule Controller

MD-CCM04

Functions

Simple disign

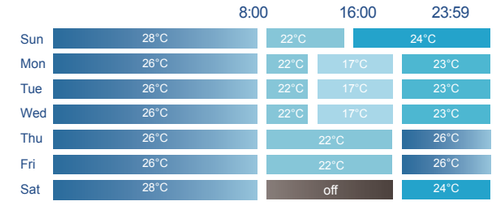
MD-CCM04 can be used as a weekly schedule wired controller or general wired controller. It can query the indoor temperature and the setting parameters of the weekly schedule. It can display the error codes and running state of the indoor unit. With the LCD backlight, and allows users to operation the device in a dark room.

Delay function

The function is specially designed for a person who is working overtime. During the weekly schedule running, press delay button it will delay 1hour or 2 hours to turn off the air conditioner.

Weekly schedule

Users can set up to 4 periods per day, and select the desired running mode and room temperature.



Specifications

Model	MD-CCM04
Dimensions (H*W*D)(mm)	120×120×15
Power (V)	DC 5V

Centralized Monitor

Outdoor Centralized Monitor

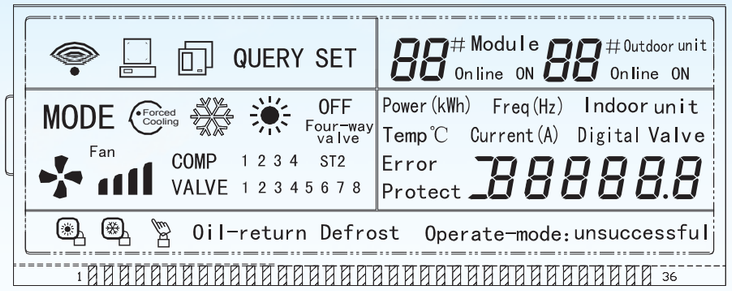
MD-CCM02

Query parameters
4-way/EXV valve
Protection/ Error codes
Power consumption
With the ODU communication
With the PC communication
Forced Cooling

Functions

ODU parameters display

MD-CCM02 enables users to easily check outdoor units' running status, including frequency, temperature, current, pressure, protection codes and error codes.



Graph 2 LCD Screen

Access to network monitoring

MD-CCM02 can connect up to 8 refrigerant systems and 32 outdoor units to the network system.

Specifications

Model	MD-CCM02
Dimensions(H×W×D)(mm)	120×120×15
Power (V)	198-242V(50/60Hz)

Central Control Software

Central Control Software

IMM(Intelligent Manager of MDV)

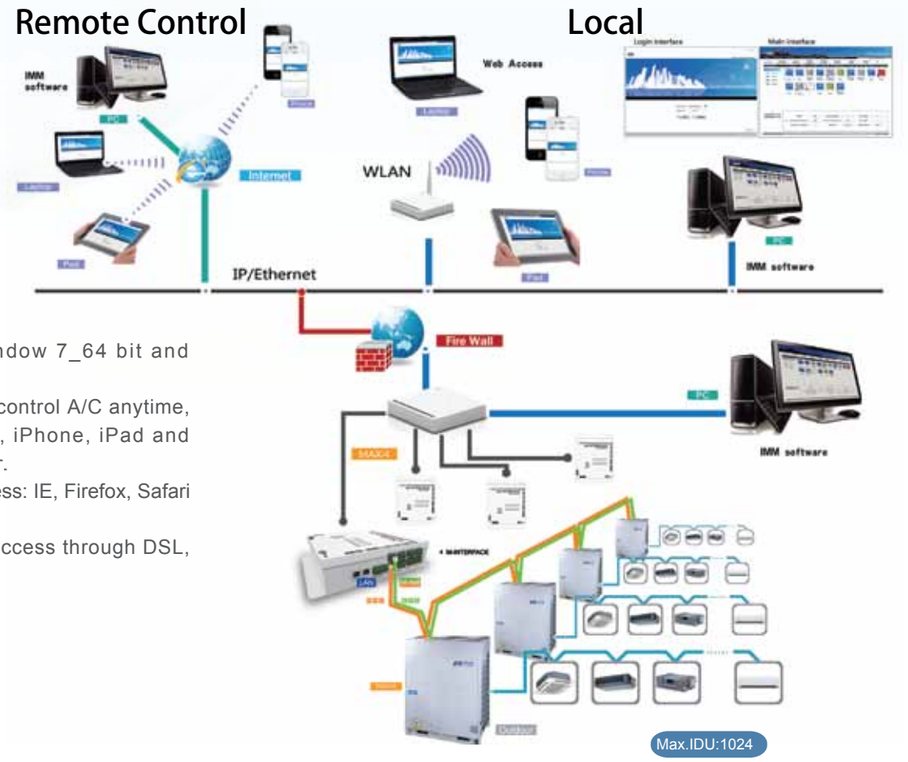
4th Generation Network Control System

Functions

Intelligent Manager of MDV, designed specifically to control VRF systems, is based on a centralized format and dedicated to the complete control and monitoring of all the system's functions. It can be used as a flexible multi-purpose system and applied to a variety of needs, according to the scale, purpose and control method of each building.

- Up to 4 M-interfaces, 64 refrigerant systems, 1,024 indoor units, and 256 outdoor units can be controlled by one PC.
- Web Access
- User friendly operation
- Central building monitoring and control
- Energy saving management
- SMS modem (optional)
- Electricity charge distribution
- Annual schedule control
- Low-load operation indicate
- Generate operational history reports (daily, weekly, monthly)
- Fault display & Warning message
- Filter replacement reminder
- Emergency stop and Alarm signal output

Network Control Application



- Can run on ,Window 7_64 bit and Window XP_32 bit.
- Can monitor and control A/C anytime, anywhere by PC, iPhone, iPad and notebook computer.
- Support WEB access: IE, Firefox, Safari and Chrome.
- Enables remote access through DSL, VPNs and so on.

Various Managements

Simple Operation and Management

Click & Operate, a user-friendly interface allows even non-experts to perform the building management system easily.

Data Management

Operational information of individual indoor units are monitored, allowing for distribution of power consumption at outdoor units.
Stores operation data on multiple systems and displays it in graphical format for visual management.
Uses IMM software to generate tenant reports and help building owners bill for energy use.

Electricity Charge Distribution(Patented)

Provides information on proportional electrical power distribution to optimize electricity consumption management.

Uses software to calculate electric power proportional distribution, output and save electricity consumption data for each indoor unit (or group) which is connected to the intelligent manager.
Applies the patented MDV Calculation Method to calculate consumption rates according to capacity demand which is based on various parameters: setting temperature, room temperature, running mode, rated HP, public areas, unused rooms, and nighttime use; outputs this information on a charge calculation sheet to evenly divide power consumption charges among tenants.

Hightlights

Web Access function

With the web access function, a PC, laptop computer or a smart phone can be used as a remote controller.

Visual Navigation

Clicking the jump button will display a list of all available screens. Clicking the back button will return to the previous screen.

Energy Saving Management

Based on a predetermined schedule, the Intelligent Manager executes capacity control and intermittent operations on all air conditioning units to maintain a high comfort index.

Data Backup

The M-interface will automatically back up data on the installed SD card (2GB) in case system failure occurs, such as: power failure or system dam. IMM software also stores the previous 3 months' operational data on the HDD.

Schedule Control

Automatically performs facility start/stop control, switches the operating mode, sets temperatures and enables/disables the remote control according to the present time schedule. 4 sections and 20 actions per day for each single unit or group.

Multiple Languages

Provides seven language settings:

English	French	Italian
Russian	German	Spanish
Simple Chinese		

Warning Message

The system can receive error messages from air conditioning units in more than one buildings or structures via public phone lines.
*Requires the MDV "SMS Modem" to send automatic warning messages to designated phone numbers.

Electricity Charge Distribution

Electricity charges can be easily divided when billing users for air conditioning power charges; for example, for tenants in a commercial building, offices in a rented building, or rooms in a hotel.

Accessories

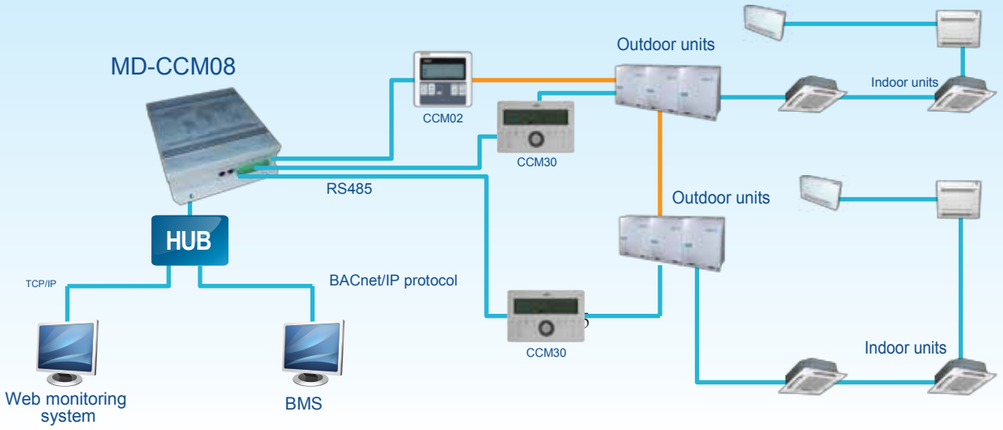
BACnet® BMS Gateway

MD-CCM08

Contains 4 groups of RS485 communication ports and be able to connect up to 256 indoor units or 128 outdoor units to the BMS.
Be free to connect to the BMS or not.

Network example

One MD-CCM08 gateway can connect MAX.4 CCM02 or CCM03,and each 485 port only can connect one CCM02 or one CCM03/CCM30.



Monitoring units online

MD-CCM08 allows users to track units' operational status and change their running parameters on Internet Explorer for maximum control convenience

Wide compatibility

CCM08 has a wonderful adaptability to the BMS

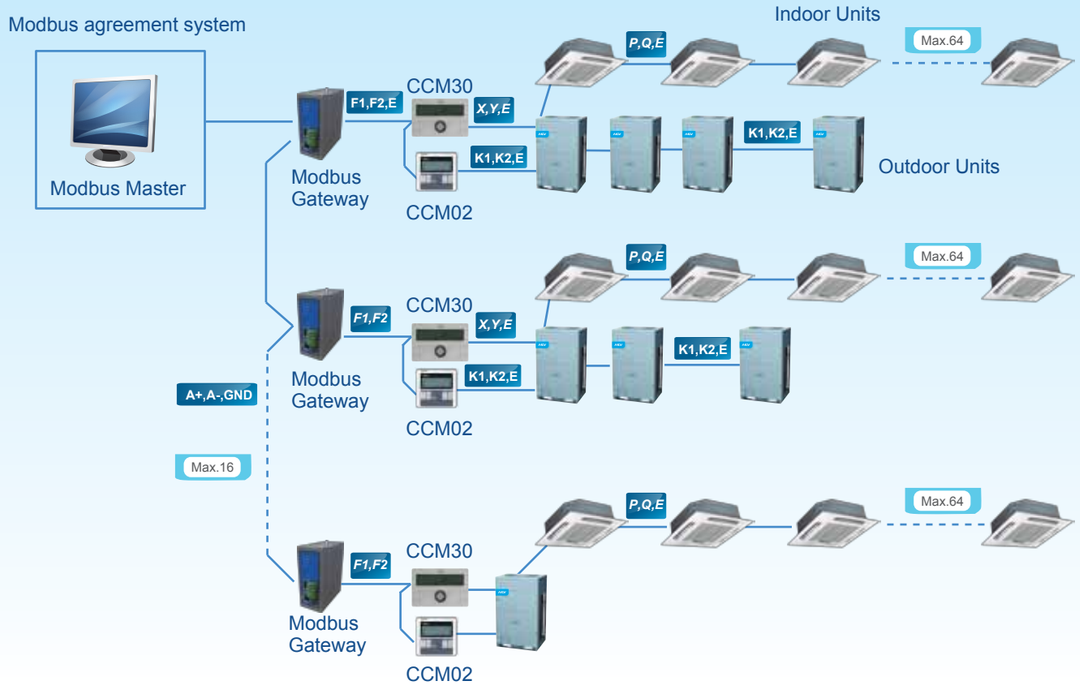
	Company	BMS software	Brand
1	SIMENS	APOGEE	APOGEE
2	TRANE	Tracer Summit	TRACER SUMMIT
3	Honeywell	Alerton	ALERTON
4	Schneider	Andover	AndoverControls
5	Johnson	METASYS	METASYS

Accessories

Modbus BMS Gateway

Supports Modbus protocol networks
Bridges the MDV central A/C system and the BMS
Establishes a Modbus network comprising up to 1,024 indoor units and 64 outdoor units
Transfers data in RTU mode
Provides a wide voltage range: 12-48V DC

Network example



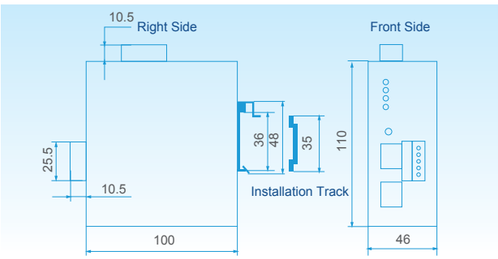
One Modbus gateway can bridge one refrigerant system with a PC or the Modbus master.

Config A/C System via Web

When the Modbus network is set, users can conveniently configure their A/C network system over the Internet using different TCP/IP browsers.

Dimensions

The Modbus Gateway is designed with a small size. It's equipped a installation track for the easy on-site installation.



Accessories

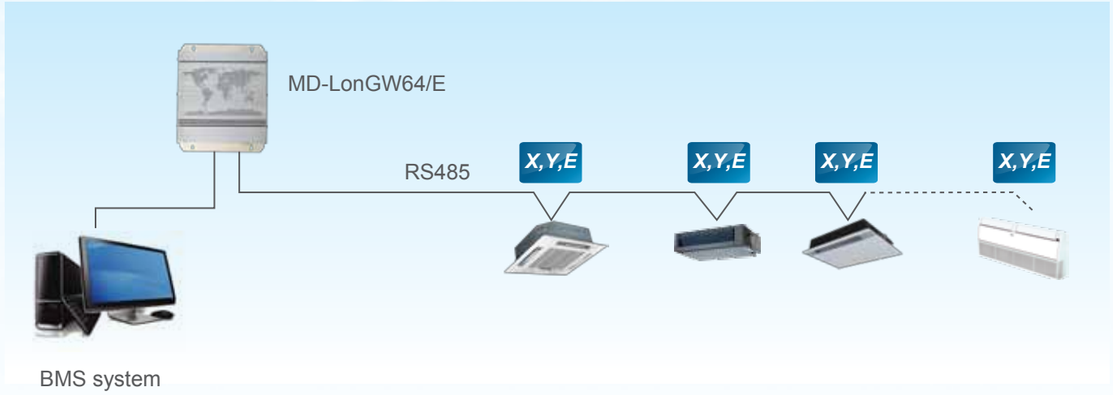
LonWorks® BMS Gateway

MD-LonGW64

Compliance with LonMark protocol,and realizes the management and control of A/C.
Can connect up to 64 indoor units to the BMS.
Realizes non-polarity communication,and also the application can be download online.

Network example

Connection method 1: Suitable for all of air conditioner systems and connect max.64 indoor units.



Connection method 2: Only suitable for V4 plus system and connect max.64 indoor units.

■ Specifications

Model	MD-LonGW64
Dimensions (H*W*D)(mm)	31.9×25.1×6.1
Power (V)	177~265V AC(50Hz/60Hz)

3-Phase Protector

HWUA/DPB71CM48

Detect the power condition and make the corresponding protecting action.
Protect the compressor from being damaged.
Automatically distinguish the abnormal power supply conditions and automatically recover.

HWUA DPB71CM48

Excellent reliability

The protector protects the entire system from power supply problems, and auto restart after recovery.

Specifications

Model	With over/under voltage function				Without over/under voltage function
	HWUA	DPA53CM23	HWUA	DPB71CM48	DPA51CM44
Power supply (V-N-Hz)	220~480V-3N 50/60Hz	208~480V-3N 50/60Hz	220~480V-3N 50/60Hz	380~480V-3N 50/60Hz	208~480V-3N 50/60Hz
Temp. range(˚C)	-20˚C~50˚C	50Hz: -20˚C~60 ˚C 60Hz: -20˚C~50 ˚C	-20˚C~50˚C	-20˚C~50˚C	50Hz: -20˚C~60˚C 60Hz: -20˚C~50˚C
Rated operational power(VA)	2.9 VA	7 VA	2.9 VA	13 VA	13 VA
Over voltage	12%	12%	18%	18%	/
Under voltage	-12%	-12%	-12%	-12%	
Phase imbalance	8%	/	8%	8%	
Dimensions(W×H×D)(mm)	90×69×35	81×67.2×17.5	90×69×35	81×67×35	81×67.2×17.5

Digital Power Ammeter

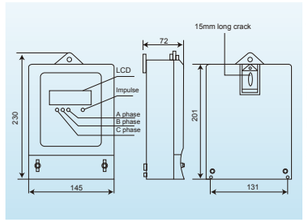
DTS634/DTS636

Calculates power consumption.
Does not need adjusting after long-term use.
Corresponds one outdoor unit to one digital power meter.

Low power consumption

The digital power meter consumes minimal energy.
Voltage circuit: less than 2W/10VA
Current circuit: less than 2.5VA

Indications and installation



The digital power meter is tested after manufacture so it can be immediately deployment and used on-site. The LED indicators and installation schematic are shown in the figure on the left.

■ Specifications

Model	DTS634/DTS636
Dimensions (H*W*D)(mm)	230×145×72
Power (V)	200V-500V(50/60Hz)

Remote Alarm Controller

KJR-32B

Functions

Simple design

KJR-32B is specially designed for engineering applications. It does not display the ODU's working parameters, but it can connect to the alarm device when ODU is working abnormally, the RUN light will flash.

■ Specifications

Model	KJR-32B
Dimensions (H*W*D)(mm)	150×85×70
Power (V)	198-242V(50/60Hz)

Indoor Unit Group Controller

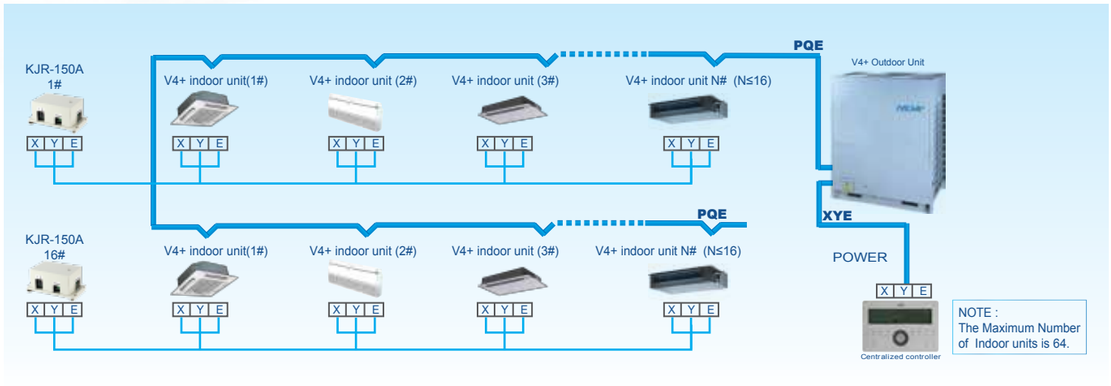
KJR-150A

Functions

Simple design

KJR-150A is specially designed for V4 plus indoor units. A group controller can connect up to 16 V4 plus indoor units through X1, Y1 and E terminals, but it cannot directly connect to the central controller. If you need to use a central controller or a PC, you can connect to the XYE from an outdoor unit. A group controller can control a group of indoor units simultaneously, and query the running status of each unit in the group via the display panel.

System wiring diagram



■ Specifications

Model	KJR-150A
Dimensions (H*W*D)(mm)	150×85×70
Power (V)	198-242V(50/60Hz)

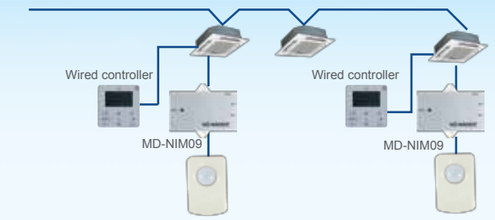
Accessories

Infrared sensor controller

MD-NIM09

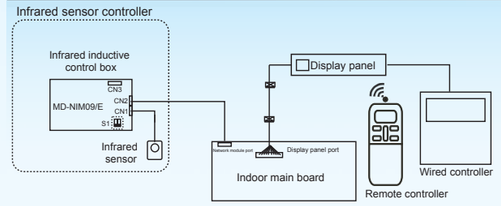
Automatically adjust the room environment.
Automatically extend the shutting down time, avoiding frequent ON/OFF.
Graceful appearance accommodates itself to different buildings.

Installation example



MD-NIM09 works together with the wired controller.

Electrical wiring



■ Specifications

Model	MD-NIM09
Dimensions(H×W×D)(mm)	Senor part: 46×30×25.6, Control box: 86×72.8×15.5
Power	DC 5V

Hotel Card Key Interface Module

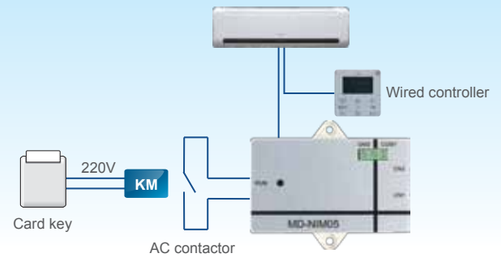
MD-NIM05

Cooperate with the wired controller to automate control.
Eliminates the need for high voltage power, making the device safe and steady.
Includes a build-in auto-restart function.

Installation example

Wired controller is necessary in this card-key system.

Electrical wiring



■ Specifications

Model	MD-NIM05
Dimensions (H*W*D)(mm)	86×72.8×15.5
Power (V)	DC 5V

Accessories

AHU Control Box

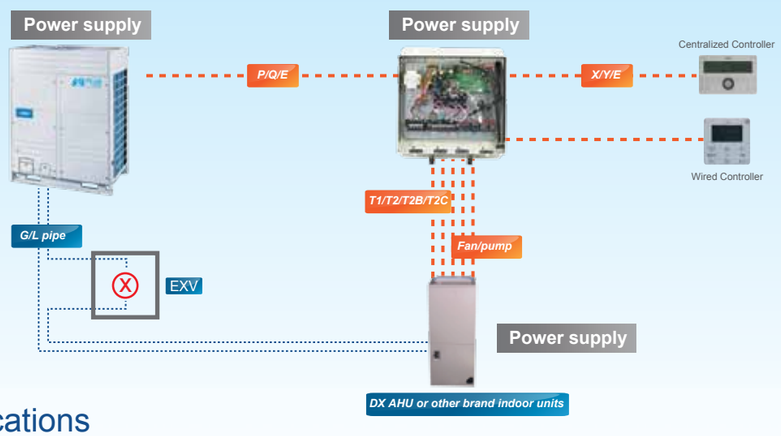
AHUKZ-01A/AHUKZ-02A/AHUKZ-03A

V4+ functions inside.

Can be used to connect VRF outdoor units with DX AHU or other brand indoor units

Introduction

AHUKZ-01A/AHUKZ-02A/AHUKZ-03A is an independent control box that can connect a AHU to V4 plus system to realize centralized control with V4 plus system. Control box wiring is as follows:



■ Specifications

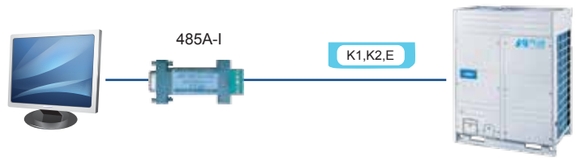
Model	AHUKZ-01A/AHUKZ-02A/AHUKZ-03A
Dimensions(H×W×D)(mm)	335×375×150
Power (V)	220-240V~ 50Hz 208-230V~ 60Hz

MDV Outdoor Unit Diagnosis Software MCAC-DIAG/E

Display the outdoor units' real-time running conditions.
Automatically outputs running status charts.
Supports V3, V4, V4+, D3, D4 outdoor units.

Wiring diagram

The diagnostic software applies to K1, K2, E of the outdoor units. The corresponding wiring diagram is shown in the figure on the right.



■ Recommended config

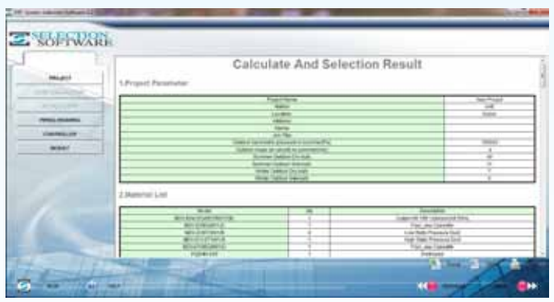
Operating system	WIN XP SP4/WIN 7
CPU	Pentium 4 2G or above
HDD	30G free space
Interface port	RS-232 terminal

Selection software

To meet consultants' and distributors' requirements, MDV has developed an advanced design automation tool that can be used in AutoCAD-based CAD version or Windows-based Sales version. The software provides quick and convenient selectable options for users, supports multiple languages, and greatly improves the selection process.

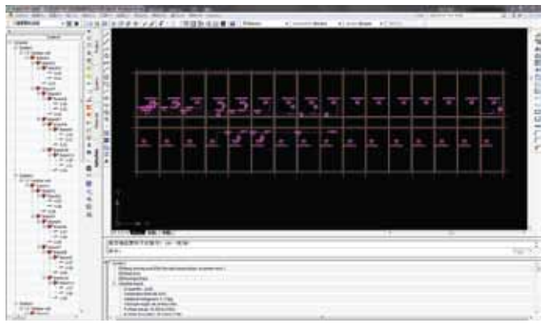
Windows Version

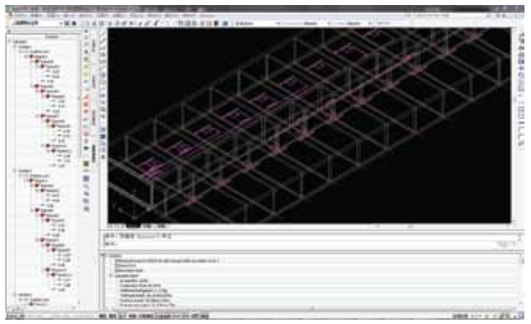
Load calculation： Provides two calculation methods (detailed room load calculation and rough load calculation).
Indoor & outdoor units selection: There are versatile indoor units and different outdoor units for choosing.
Piping drawing: Displays the detailed layout of an A/C system and the parameters for piping and branch distributors.
Controller selection: Provides a selection of controllers for indoor units and outdoor units, including wireless and remote controllers for indoor units.
Report output: Outputs a comprehensive selection report as a Word or PDF document.



CAD Version

AutoCAD add-on software
Automatic Calculation: Refrigerant & drain pipe size
Automatic Selection: Distributor kit & branch joint
System Check: Installation regulation & refrigerant addition
Automatic Report: Piping installation diagram, equipment list & quotation





Accessories

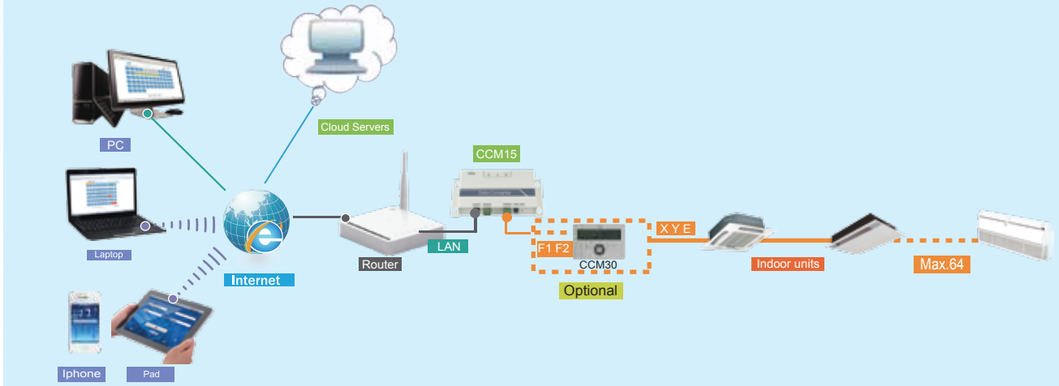
Data converter

CCM15

- Can realize data conversion between TCP/IP protocol and 485 protocol.
- WEB function realizes VRF system's webpage access.
- User can monitor and query the air conditioners through LAN and WAN.
- Providing the TCP / IP port for VRF system of MDV to achieve WEB/HTTP/TCP/IP access.
- Can remotely control the A/C systems through computer, iPhone, iPad or other intelligent terminals.

Network example

- Can be directly connected with XYE port of the indoor units.
- Up to connect 64 indoor units.
- CCM03/CCM30 is optional and can be connected with CCM15 through F1, F2 and E ports.
- The system consisting A/C system, data converter CCM15, router, cloud server and control terminal.



Simply control interface

- Software control/ Cloud server control (WEB access).
- Click & operate, a user-friendly interface.
- Allows signal and group control.
- Simplified user control interface.
- Colour indication and icon makes it easy to recognize unit state.
- Can full screen display and the temperature can be adjusted by fingers' sliding.

Weekly schedule control

- With weekly schedule function for iPad.
- Multiple sections in each day for single unit or group.
- Automatically performs facility start/stop control, operating mode, setting temperatures and according to the present time schedule.

Web features

- Query and control single unit or group.
- Weekly schedule setting: can set multiple sections in each day for single unit or group.
- Group user control : a user can use the same ID to manage hundreds of CCM15, when selecting the "As group user" button on the login page.
- History error: easy service and management with history error function.

Intelligent control

- The air conditioner remote control can be realized by mobile phone or tablet computer.
- You can query the running state of the air conditioner any time and any where and even make an appointment in advance.
- Can remotely turn off the air conditioner to avoid the power waste, when you are in a hurry to leave.

HRV

Heat recovery ventilator

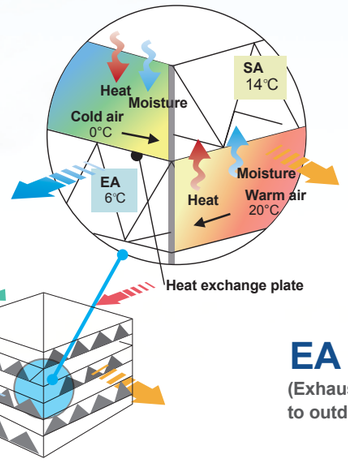
Larger air supply rate
enhanced heat exchange efficiency
enhanced energy saving property

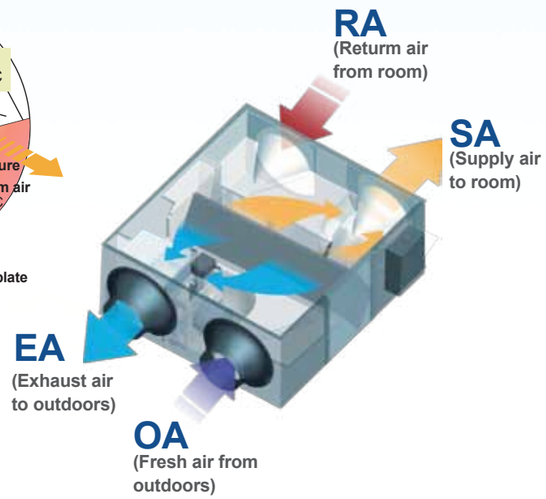
The heat recovery ventilator (HRV) can reclaim heat energy lost through ventilation and reduce the room temperature fluctuation caused by ventilation process. By utilizing the most advanced technology and technics, MDV HRV has extremely good performance. The heat exchanged core is made of special paper processed with chemical treatment, which could realize better temperature and humidity control of the room environment. Temperature exchange efficiency is above 65% and enthalpy exchange efficiency between 50-65%.

Model Names

HRV-400 HRV-800
HRV-500 HRV-1000

HRV-1500 HRV-2000



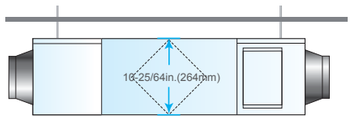


Low noise

Sound proof material is used to guarantee quiet operation.

Compact design, flexible installation and easy maintenance

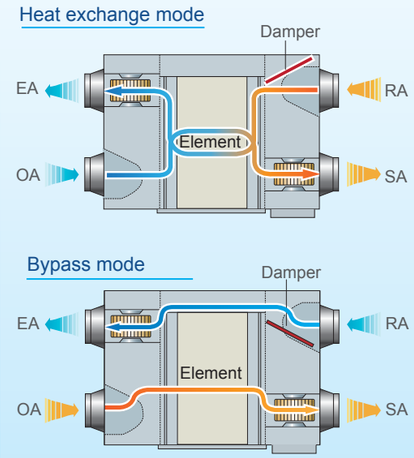
With a min. height of only 10-25/64in.(264mm) and 50lbs (23kg) weight, the unit provides best convenience and possibility for installation in limited spaces.



Multi-modes for different situations

Heat exchange mode

When air flow formed by the fans goes through the heat exchanged core in cross way, due to temperature difference between two channels of the core, thermal transmission happens naturally.
In summer days, high temperature outdoor air gets cooled by indoor exhaust air; in winter, low temperature outdoor air gets heated by indoor exhaust air. So the energy contained in exhaust air can be reclaimed and energy efficiency gets improved.



Bypass mode

In mild climate areas or seasons, when temperature and humidity level difference between indoor and outdoor is small, the unit works as conventional ventilation fan. Both supply fan and exhaust fan works at the same speed (Hi/mid/low/auto).

Air supply mode

It is one kind of bypass mode with air supply fan speed higher than exhaust fan speed. It can be used in mild climate area where large amount fresh air is needed.

Exhaust air mode

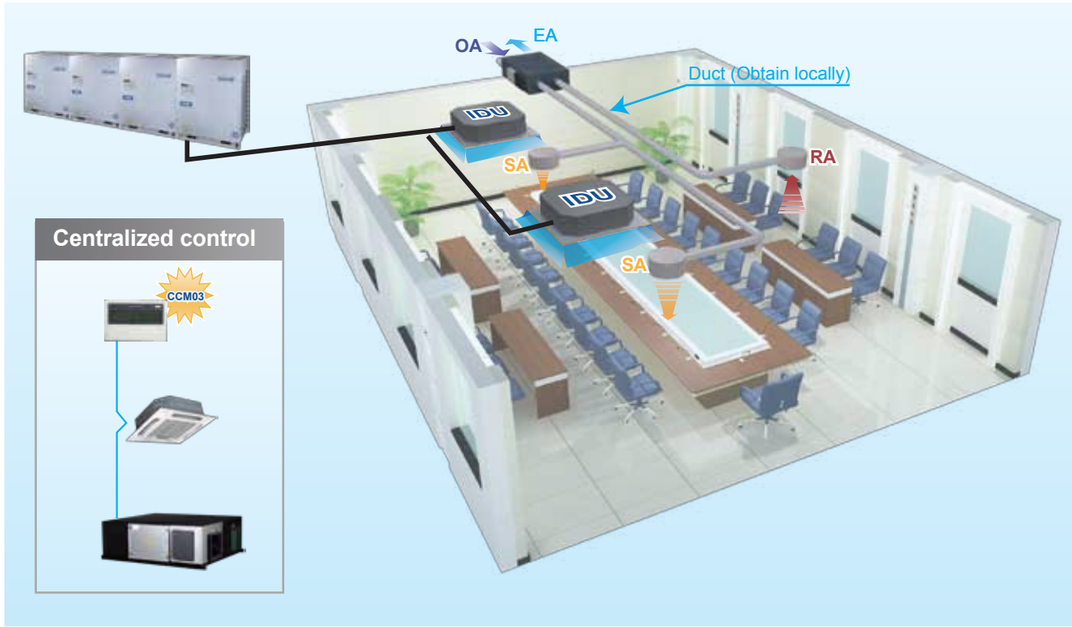
It is also one kind of bypass mode with exhaust fan speed higher than air supply fan speed. It can be used in mild climate area where large amount exhaust air needs to be expelled.

Auto mode

The controller chooses heat exchange mode or bypass mode according to the temperature difference between outdoor and indoor temperature. Both the two fans work at low speed.

Flexible control

Interlocking control with other indoor units by controller is possible.

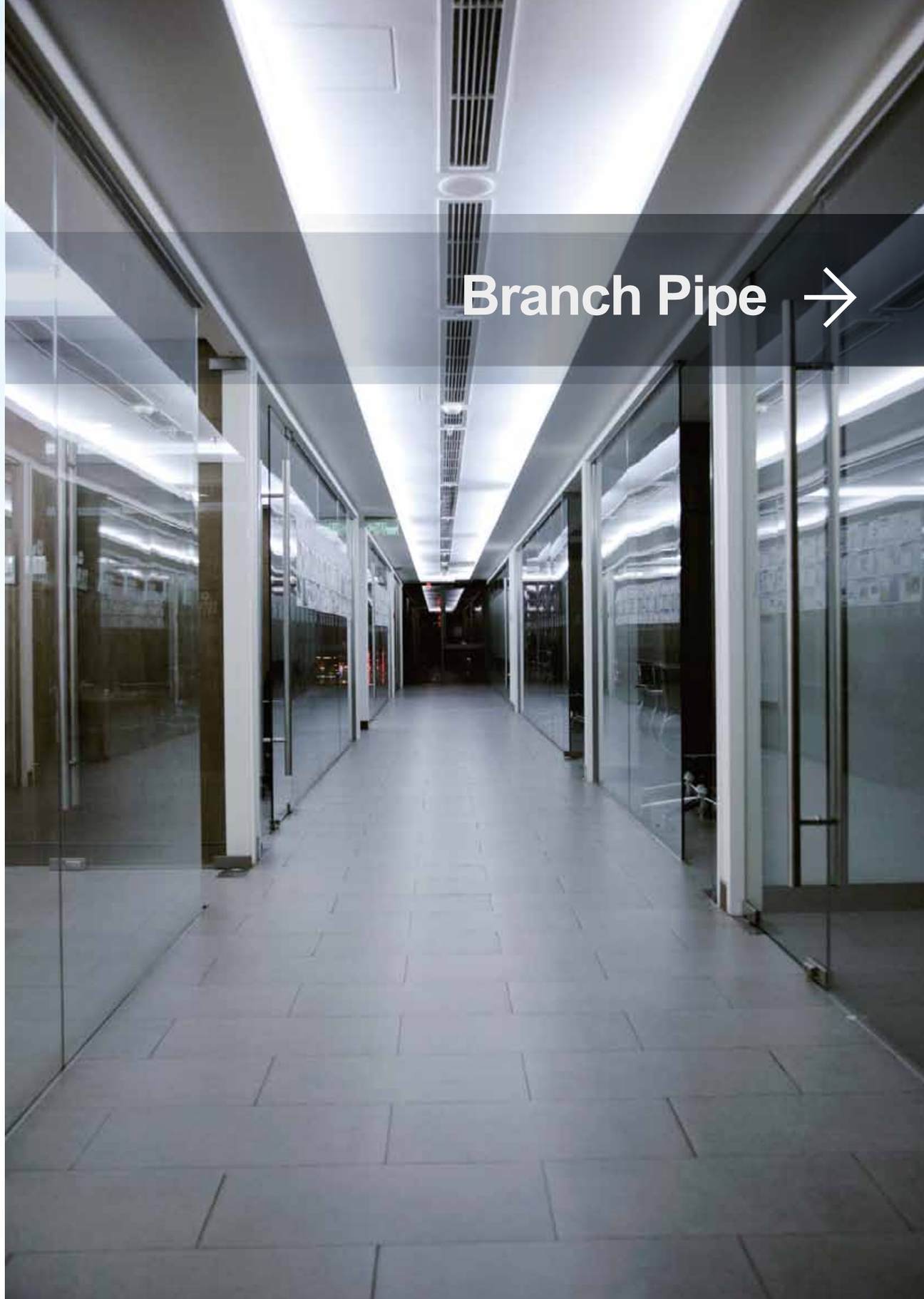


Specifications

Model				HRV-400	HRV-500	HRV-800
Power Supply			V/Ph/Hz	220V~ 60Hz		
Temp. Exchange Efficiency (%) [60Hz]			%	65	65	65
				65	65	65
				70	70	70
Enthalpy Exchange Efficiency (%) [60Hz]	For Cooling	High	%	50	50	50
		Medium		50	50	50
		Low		55	55	55
	For Heating	High		60	60	60
		Medium		60	60	60
		Low		65	65	65
Sound Level	Heat Exchange Mode	High	dB(A)	32	35	39
		Medium		31	34	38
		Low		25	28	32
	Bypass Mode	High		33	36	40
		Medium		32	35	39
		Low		27	30	34
Dimensions(W×D×H)			mm	944×927×270	10,38×1,026×270	1,286×1,006×388
Machine Weight			kg	31	41	62
Casing			-	Galvanized steel plate		
Heat Exchange System			-	Air to air cross flow total heat (Sensible heat + latent heat) exchange		
Heat Exchange Element Material			-	Specially processed nonflammable paper		
Fan	Type		-	Centrifugal fan		
	Airflow Rate [60Hz]	High	m^3/h	400	500	800
		Medium		400	500	800
		Low		300	375	600
	ESP (Pa) [60Hz]	High	Pa	80	80	100
		Medium		65	68	82
		Low		43	45	54
	Motor Output		W	80	120	360
Duct diameter			Φ/mm	144	194	242
Operation ambient condition			-	19.4°F~109.4°F（-7°C~43°C）DB, 80%RH or Less		

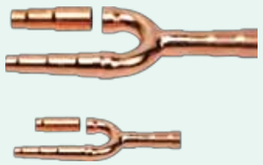
Model				HRV-1000	HRV-1500	HRV-2000
Power Supply			V/Ph/Hz	220V~ 60Hz	220V 3N~ 60Hz	
Temp. Exchange Efficiency (%) [60Hz]			%	65	65	65
				65	/	/
				70	/	/
Enthalpy Exchange Efficiency (%) [60Hz]	For Cooling	High	%	50	50	50
		Medium		50	/	/
		Low		55	/	/
	For Heating	High		60	60	60
		Medium		60	/	/
		Low		65	/	/
Sound Level	Heat Exchange Mode	High	dB(A)	40	51	53
		Medium		39	/	/
		Low		33	/	/
	Bypass Mode	High		41	52	54
		Medium		40	/	/
		Low		35	/	/
Dimensions(W×D×H)			mm	1,286×1,256×388	1,600×1,270×540	1,650×1,470×540
Machine Weight			kg	79	163	182
Casing			-	Galvanized steel plate		
Heat Exchange System			-	Air to air cross flow total heat (Sensible heat + latent heat) exchange		
Heat Exchange Element Material			-	Specially processed nonflammable paper		
Fan	Type		-	Centrifugal fan		
	Airflow Rate [60Hz]	High	m^3/h	1,000	1,500	2,000
		Medium		1,000	/	/
		Low		750	/	/
	ESP (Pa) [60Hz]	High	Pa	100	160	170
		Medium		85	/	/
		Low		58	/	/
	Motor Output		W	360	450	450
Duct diameter			Φ/mm	242	346×326	346×326
Operation ambient condition			-	19.4°F~109.4°F（-7°C~43°C）DB, 80%RH or Less		

Note:
1. For the units model of HRV (400-1000), there are 3-speed adjustable air volume (Hi, Med, Low), but for the units model of HRV (1500-2000), there are only 1-speed which cannot be adjusted.
2. Sound level is measured at 1.4m below the center of the body in an anechoic chamber..
3. Airflow rate can transmit between low mode and high mode
4. Temperature Exchange Efficiency is the mean value between cooling and heating
5. Efficiency is measured under the following conditions:
* Cooling Condition: Air Exhaust Temp. 27°C DB,19.5°C WB., Fresh Air Temp. 35°C DB,28°C WB
* Heating Condition: Air Exhaust Temp. 21°C DB,13°C WB., Fresh Air Temp. 5°C DB,2°C WB



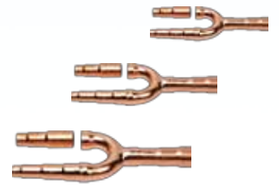
Branch Pipe

Branch joints of two-pipe refrigerant system

Model	Appearance	Model name	Packing Size (mm)/ Gross Weight (kg)	Description
Branch joint for 410A outdoor unit		FQZHW-02N1D	255×150×185/1.5	For two outdoor units connection
		FQZHW-03N1D	345×160×285/3.4	For three outdoor units connection
		FQZHW-04N1D	475×165×300/4.8	For four outdoor units connection
Branch joint for R410A indoor unit		FQZHN-01D	290×105×100/0.4	A*<16.6kW
		FQZHN-02D	290×105×100/0.6	16.6≤A*<33kW
		FQZHN-03D	310×130×125/0.9	33kW≤A*<66kW
		FQZHN-04D	350×180×170/1.5	66kW≤A*<92kW
		FQZHN-05D	365×195×215/1.9	92kW≤A*

A*:The total capacity of indoor units following this branch joint

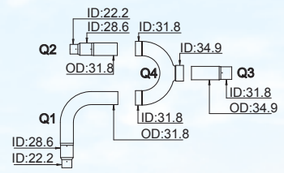
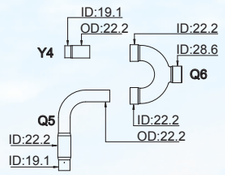
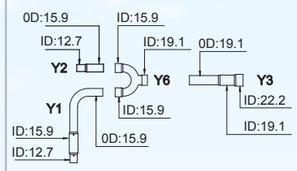
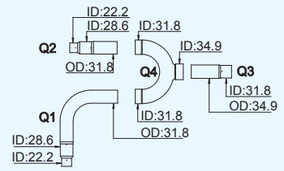
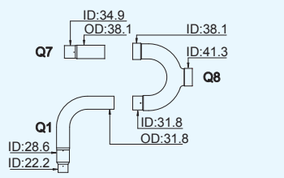
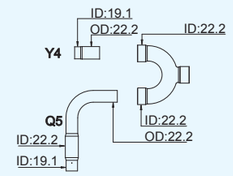
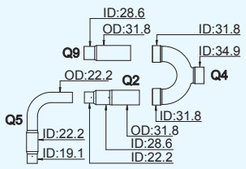
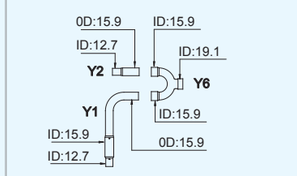
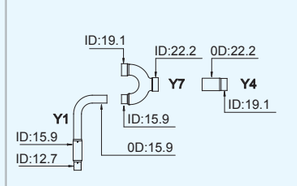
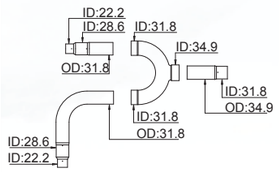
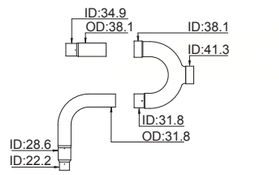
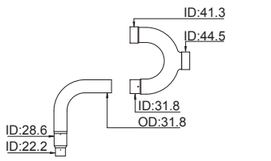
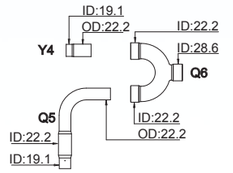
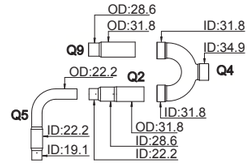
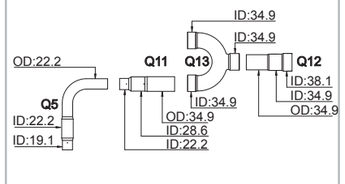
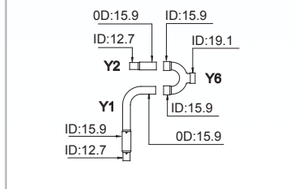
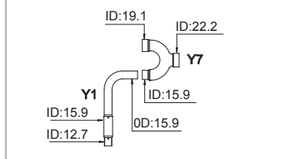
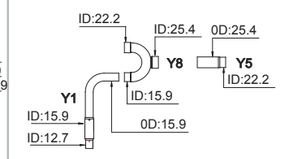
Branch joints of three-pipe refrigerant system

Model	Appearance	Model name	Packing Size (mm)/ Gross Weight (kg)	Description
Branch joint between outdoor unit		FQZHW-02SB	272×167×232/2.2	For two outdoor units connection
		FQZHW-03SB	472×157×312/5.0	For three outdoor units connection
		FQZHW-04SB	745×160×335/7.5	For four outdoor units connection
Branch joint between MS unit and outdoor unit		FQZHN-01SB	257×127×107/0.8	A*<16.6kW
		FQZHN-02SB	287×137×107/0.9	16.6≤A*<33kW
		FQZHN-03SB	297×167×177/1.4	33kW≤A*<66kW
		FQZHN-04SB	372×197×187/2.3	66kW≤A*<92kW
		FQZHN-05SB	432×222×227/3.3	92kW≤A*
Branch joint between MS unit and indoor unit		FQZHN-01D	290×105×100/0.4	A*<16.6kW

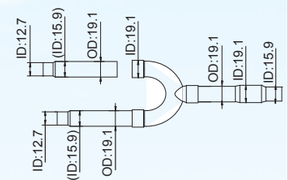
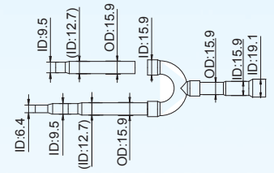
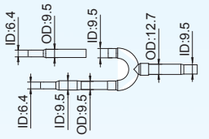
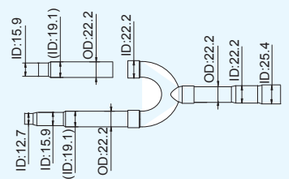
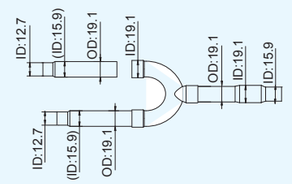
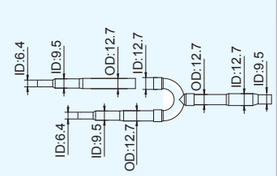
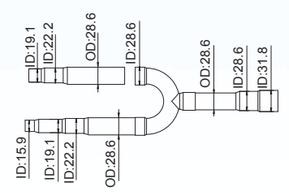
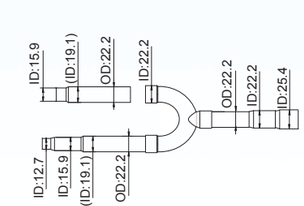
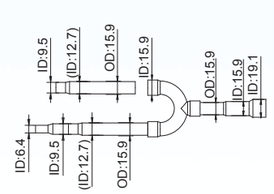
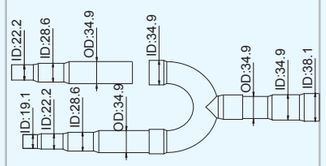
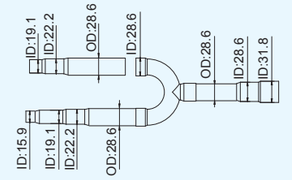
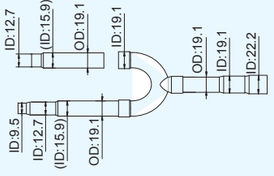
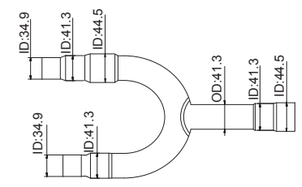
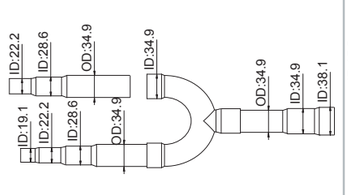
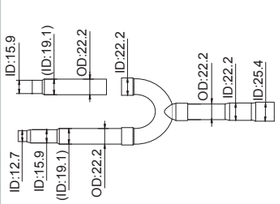
A*:The total capacity of indoor units following this branch joint

Dimensions

Outdoor branchs joint of three-pipe refrigerant system

Branch model	Low pressure gas side joints	High pressure gas side joints	Liquid side joints
FQZHW-02SB			
FQZHW-03SB	 	 	 
FQZHW-04SB	  	  	  

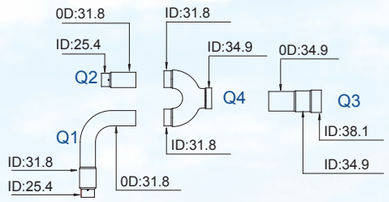
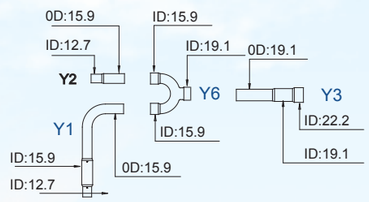
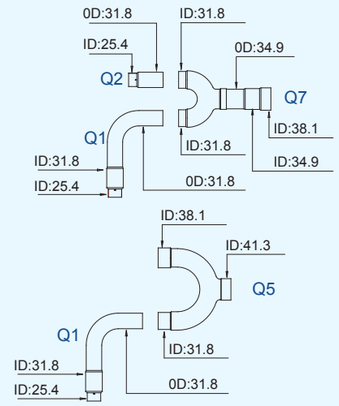
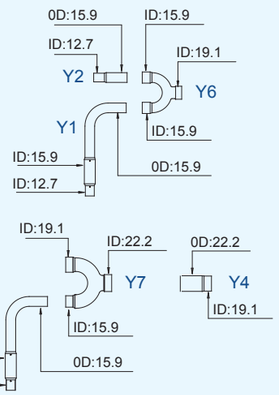
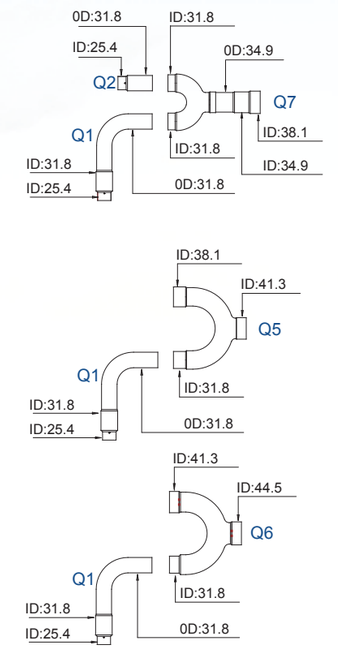
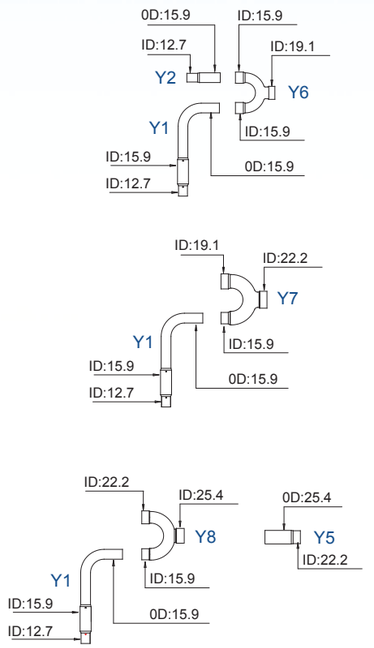
Indoor branch joints of three-pipe refrigerant system

Branch model	Low pressure gas side joints	High pressure gas side joints	Liquid side joints
FQZHN-01SB			
FQZHN-02SB			
FQZHN-03SB			
FQZHN-04SB			
FQZHN-05SB			

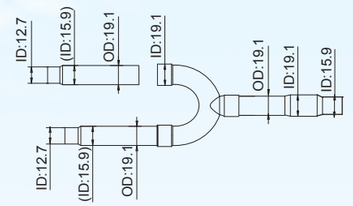
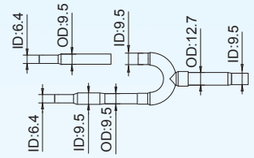
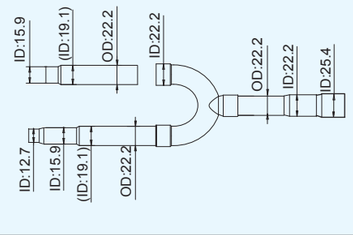
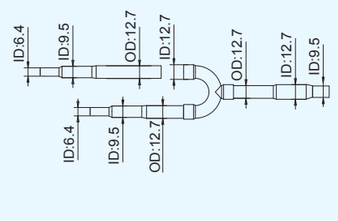
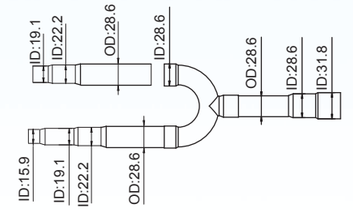
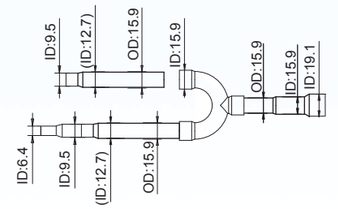
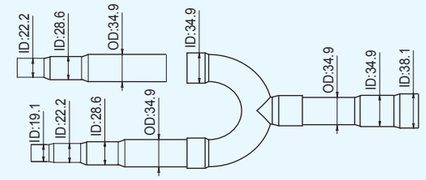
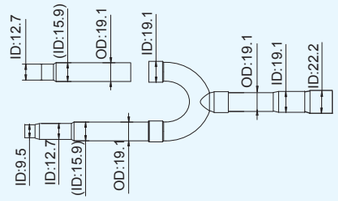
Branch Pipe

Dimensions

Outdoor branch joints of two-pipe refrigerant system

Branch model	Gas side joints	Liquid side joints
FQZHW-02N1D		
FQZHW-03N1D		
FQZHW-04N1D		

Indoor branch joints of two-pipe refrigerant system

Branch model	Gas side joints	Liquid side joints
FQZHN-01D		
FQZHN-02D		
FQZHN-03D		
FQZHN-04D		
FQZHN-05D